

GEOTECHNICAL INVESTIGATIONS REPORT
OF THE
PIPING FAILURE OF ANITA DAM

Second Phase of Additional Investigations
(Drilling, Standard Penetration Tests, and Additional Laboratory Testing)

Report by Lovell Parish

Purpose of this Report

This report documents the final portion of investigations recommended by the Board of Inquiry convened to determine the cause of the piping failure at Anita Dam. Two previous reports by this author have presented the results of other portions of the extended investigative program.

Drilling, sampling, and in situ testing for this phase of subsurface explorations were completed during May of 1997, utilizing personnel and equipment of the Bureau of Reclamation and the Bureau of Land Management. Laboratory testing was performed by two commercial laboratories in Billings, Montana.

Investigations consisted of drilling a total of 5 holes in the embankment and foundation of the dam to determine characteristics of both the embankment and foundation materials. Four of the holes were drilled along the dam axis and the other was completed near the vertical risers for the valve control structure and the overflow spillway. Standard Penetration Tests (SPT) were conducted in the embankment and foundation to detect soft zones and provide representative material for moisture determinations, gradations and Atterberg Limits. Two undisturbed samples were collected for one-dimensional consolidation testing near the base of the vertical risers, and an additional sample of embankment was tested for the presence of dispersive clays. Double porous tube piezometer installations were completed in two of the drill holes.

Appendices attached to this report contain both raw data and interpretative information derived from that data. Appendix A includes an investigations locations map provided by BLM and a geologic section along the axis of the dam constructed from data obtained by recent drilling. Appendix B contains the individual geologic logs for the five new drill holes. Appendix C includes separate data sheets for each SPT test that was performed and a summary table of test results. Appendix D includes laboratory test data on moisture contents, gradations, and Atterberg Limits. Also included in Appendix D are the results of one-dimensional consolidation tests and an additional test for the presence of dispersive clays.

A supplemental Bibliography is included at the end of the text.

Findings

The most recent investigations at Anita Dam confirmed some findings from previous explorations and provided new information about other aspects of the damsite and existing structure.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

LABORATORY OF ORGANIC CHEMISTRY

REPORT OF RESEARCH WORK DURING THE YEAR 1954

BY ROBERT L. BAKER

ADVISOR: ROBERT L. BAKER

The work reported in this report was carried out during the year 1954 in the Laboratory of Organic Chemistry, Department of Chemistry, University of Chicago. The work was supported by the National Science Foundation, Grant No. 12408, and the University of Chicago.

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REFERENCES

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Drawing 9008-600-140 is a geologic section along the axis of the dam from left to right looking downstream. It presents a somewhat generalized interpretation of materials encountered in both the dam and the underlying foundation. Most of the structure is founded on glacial till classified as Lean Clay With Sand And Cobbles (CL), with a lake or pond sediment classifying as Sandy Lean Clay (CL) being under the left abutment. The Bearpaw Shale bedrock that was reported by BLM personnel as being present in the cutoff trench was not encountered by any of the recent drill holes even though they penetrated to a maximum depth of 100 feet.

The glacial till varied from brown to gray in color and consisted of mostly low plasticity fines with a minor amount of fine to coarse sand and a trace of predominantly fine gravel and cobbles. Rare small boulders were also present in the deposit. A gradation average for five samples was 72.8% fines, 26.7% sand, and 0.5% gravel. The average liquid limit (LL) was 40% and the average plasticity index (PI) was 28%. Moisture content average for all till samples was 17.1%.

Lacustrine material was only identified in PR97-205. It was brown in color and composed of mostly low plasticity fines and predominantly fine to medium sand. The gradation for the single sample tested was 75.8% fines, and 24.2% mostly fine sand. No gravel was present. The LL was 42% and the PI was 29%. Average moisture content for all lacustrine samples was 13.7%.

Embankment material varied in color from brown to gray and consisted of mostly low plasticity fines with fine to coarse sand and a trace of mostly fine gravel. The average gradation for four samples was 79.1% fines, 20.5% sand, and 0.4% gravel. The average LL was 43% and the average PI was 30%. The moisture content averaged 14.5%.

A total of 122 SPT tests were completed during the recent investigations. They were conducted at approximate 5 foot intervals through the embankment and at approximate 2.5 foot intervals in foundation materials. The primary purpose of these tests was to detect soft zones. In order to expedite the drilling program they were completed through the hollow stem auger system without having the hole filled with drilling fluid, so the results should not be used for liquefaction potential studies. Individual SPT data sheets are included in Appendix C along with summary tables for each drill hole that show blow counts and moisture contents of the sampled material.

The average blow count per foot of penetration in the embankment was 16 while the blow count for the glacial till averaged 14 and the lacustrine 24 blows. For individual holes the average blow counts were:

PR97-201
embankment = 17
glacial till = 7

PR97-202
embankment = 15
glacial till = 22

PR97-203
embankment = 15
glacial till = 12

PR97-204
embankment = 16
glacial till = 15

PR97-205
embankment = 21
lacustrine = 24
glacial till = 20

The first of these is the fact that the
government has been unable to
maintain a stable currency. This
has led to a loss of confidence
in the government and a consequent
loss of support for its policies.

The second of these is the fact that
the government has been unable to
maintain a stable economy. This
has led to a loss of confidence
in the government and a consequent
loss of support for its policies.

The third of these is the fact that
the government has been unable to
maintain a stable society. This
has led to a loss of confidence
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The fourth of these is the fact that
the government has been unable to
maintain a stable foreign policy. This
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The fifth of these is the fact that
the government has been unable to
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maintain a stable international relations. This
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loss of support for its policies.

The seventh of these is the fact that
the government has been unable to
maintain a stable domestic relations. This
has led to a loss of confidence
in the government and a consequent
loss of support for its policies.

A table of relative firmness in the Bureau of Reclamation's "Earth Manual" shows the following blow count classifications. It should be noted, however, that this table is based on "saturated" fine grained soils and the soils in these tests were mostly from "unsaturated" units so the results may be misleading if the units become saturated at a future date.

<u>Blows per Foot</u>	<u>Consistency</u>
below 2	very soft
2 to 4	soft
4 to 8	medium
8 to 15	firm
15 to 30	very firm
above 30	hard

Using this table as a guide, the SPT blow counts recently obtained generally varied from "very soft" to "firm" with some counts falling in the "very firm" and "hard" categories. The softest materials were encountered in the glacial till of the foundation in drill holes PR97-201 and -203. In some instances, the SPT barrel and drill rods settled through the test interval without being struck by the 140 pound drive hammer, thus indicating some extremely soft material. With only one exception (6 blows from 37.5 to 38.5 in PR97-204), the blow counts in the embankment indicated satisfactory compaction. The lacustrine material in the left abutment foundation sampled in PR97-205 had the best blow count average of 24.

Two undisturbed acrylic tube samples were collected from embankment materials near the base of the vertical risers for the valve control structure and the overflow spillway. The results of one-dimensional consolidation tests conducted on these samples are included in Appendix D. The sample from 32.4 to 33.5 feet in PR97-201 revealed a percent swell of 2.3 for a CL material having a dry density of 109.2 pcf and a natural moisture content of 18.4%. The sample from 37.0 to 38.8 feet in PR97-201 had a percent swell of 2.3 for a CL material having a dry density of 105.8 pcf and a natural moisture of 20.9%. According to the geologic log for the drill hole, these tests were conducted on embankment material lying just above the embankment/foundation contact. SPT blow counts in the area of the tests were in the 15 to 17 range.

One additional sample of embankment material was tested for the presence of dispersive clays. It was obtained from a depth of 19.5 to 24.5 feet in PR97-202. Like other samples previously tested, the results were positive.

Double porous tube piezometer installations were completed in drill holes PR97-202 and -205 to monitor groundwater levels. Piezometers were not installed in the other holes because of the likelihood they would be destroyed by future reconstruction activities. At the time the recent investigations were completed none of the piezometers indicated a groundwater level. The material encountered by drilling was very tight and if a groundwater level does exist at the elevation of the piezometers, it may take some time to permeate into the drill hole.

Conclusions

The investigations completed under this phase did not shed any further light on the exact

1. The first part of the report deals with the general situation of the country and the position of the various groups of the population. It is a very general and superficial treatment of the subject, but it gives a good impression of the general situation.

2. The second part of the report deals with the economic situation of the country. It is a very general and superficial treatment of the subject, but it gives a good impression of the general situation.

3. The third part of the report deals with the social situation of the country. It is a very general and superficial treatment of the subject, but it gives a good impression of the general situation.

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7. The seventh part of the report deals with the future of the country. It is a very general and superficial treatment of the subject, but it gives a good impression of the general situation.

8. The eighth part of the report deals with the conclusion of the report. It is a very general and superficial treatment of the subject, but it gives a good impression of the general situation.

9. The ninth part of the report deals with the appendix. It is a very general and superficial treatment of the subject, but it gives a good impression of the general situation.

methodology of failure. What caused the original path of seepage will probably never be known.

Bearpaw Shale bedrock which had been reported to be present in the cutoff trench beneath the dam was not encountered even though drill holes were completed to a maximum depth of 100 feet (as measured from the ground surface on the dam).

SPT results indicate the presence of very soft material concentrated in the foundation of the dam in the vicinity of drill holes PR97-201 and -203. This is in the thalweg of the valley floor and probably is the result of a saturated condition in the glacial till that has not yet revealed itself in the recently installed piezometers.

The SPT blow counts further showed that the compaction of the embankment was satisfactory with only one anomalous count indicating otherwise, and that the highest blow counts were recorded in the lacustrine material beneath the left abutment - which was somewhat surprising because in surrounding glaciated areas lacustrine sediments are usually some of the softer materials.

Gradations, moisture determinations, Atterberg Limits data, and dry densities from the latest investigations generally confirmed results obtained earlier.

An additional test for dispersive clays in the embankment also confirmed earlier positive results.

Recommendations

As recommended in a previous report, excavation of the outlet pipe should be observed by personnel familiar with the dam, how it was constructed, and the various modes of failure that have been proposed. Hopefully, some further evidence of the mechanism of the piping may be uncovered.

If the dam is reconstructed, the latest design criteria and construction procedures should be followed for structures containing dispersive clays and include those specific precautionary items identified in the previous investigations report.

A geotechnical engineer familiar with construction of earthen embankments on soft foundation materials should carefully review the SPT data to determine if the bearing capacity of the glacial till is sufficient to support the outlet structure without causing undue problems.

Above all, a thorough peer review should be made of the final design and all proposed construction procedures with special emphasis on dispersive clay and soft foundation problems.

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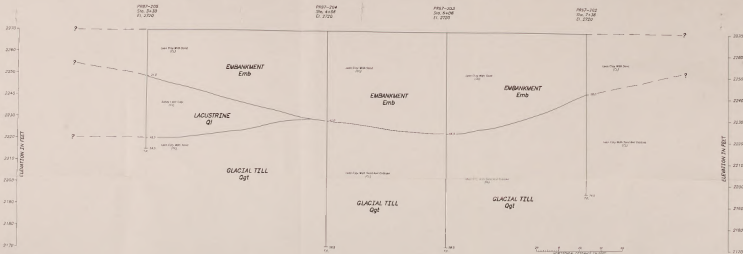
APPENDIX A
DRAWINGS



CR

Approximately N. 85° W.

Page



SYMBOLS

PPS7-208 — Drill Hole Number
Sta. 3+39 — Borehole Station
El. 2170 — Depth of Drill Hole Elevation

(Qi) — Lacustrine Qi
Qgt — Glacial Till
Qgt — Glacial Till

EXPLANATION

EMBANKMENT - Emb
Lacustrine - Qi
GLACIAL TILL - Qgt

NOTES

1. Locations of drill holes are shown on the attached plan view.
2. Synthetic Facies Map (SFM) data is presented on the attached plan view.
3. No groundwater was noted during drilling.
4. Section is not to scale.

SAFETY

WARNING: This document contains information that may be used for the development of weapons of mass destruction.

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8008-800-140





LEGEND

- 300 soil tests taken April of 1997
- 201-208 borehole testing by BOR in May of 1997
- A-E soil tests taken in January of 1995
- 20-32 soil tests taken in June & July of 1995
- 1-8 soil tests taken in October of 1993
- 101-129 soil tests taken April of 1997

SEE ATTACHED LIST FOR ELEVATIONS

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DRAWING NO. _____

DESIGNED _____

REVIEWED _____

TITLE ANITA SOILS TESTING

DATE 5-28-97

SHEET 1 of 1

DRAWN HAC-LRB/BO

APPROVED _____

0 100 200

SCALE IN FEET



APPENDIX B
GEOLOGIC LOGS



GEOLOGIC LOG OF DRILL HOLE NO. PR97-201

SHEET 2 OF 2

FEATURE: Antle Dam
 LOCATION: Center Section: U/S Face
 BEGUN: 6/1/97 FINISHED: 6/4/97
 DEPTH AND ELEV. OF WATER
 LEVEL AND DATE MEASURED:

PROJECT:
 COORDINATES: N E
 TOTAL DEPTH: 100.0
 DEPTH TO BEDROCK:

STATE: Montana
 GROUND ELEVATION: 2711.9
 ANGLE FROM HORIZONTAL: 90 AZIMUTH:
 HOLE LOGGED BY: Jim Rogers
 REVIEWED BY: L. Parish

NOTES	DEPTH	X CORE RECOVERY	GEOLOGIC UNIT SYMBOL F.L.D. CLASS/LITH	ELEVATION	SPT	X MOIST CONTENT	CLASSIFICATION AND PHYSICAL CONDITION
LOCATION: Dam station 5+45, offset 34' upstream of centerline of dam.	110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 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1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 						

GEOLOGIC LOG OF DRILL HOLE NO. PR97-202

SHEET 1 OF 2

FEATURE: Anita Dam
 LOCATION: Center Section; Crest of Dam
 BEGIN: 5/4/97 FINISHED: 5/6/97
 DEPTH AND ELEV. OF WATER
 LEVEL AND DATE MEASURED:

PROJECT:
 COORDINATES: N E
 TOTAL DEPTH: 74.5
 DEPTH TO BEDROCK:

STATE: Montana
 GROUND ELEVATION: 2720.0
 ANGLE FROM HORIZONTAL: 90 AZIMUTH
 HOLE LOGGED BY: Jia Rogers
 REVIEWED BY: L. Parlin

NOTES	DEPTH	% CORE RECOVERY	GEOLOGIC UNIT SYMBOL	F.L.D. CLASS/LITH	ELEVATION	SPT	% MOIST CONTENT	CLASSIFICATION AND PHYSICAL CONDITION
NOTE: All measurements are from ground surface.	53							0.0-28.0' EMBANKMENT MATERIAL (Emb):
	60					#12	16.4	0.0-28.0' LEAN CLAY WITH SAND (CL). About 75% fines with medium plasticity, medium dry strength, medium toughness; about 25% fine to medium sand; trace of fine to coarse, hard, subrounded to rounded gravel; maximum size recovered, 1'; gray; moist; firm; some gravel consist of coal fragments; no reaction with HCl.
All measurements are in feet unless noted otherwise.	100					#15	15.5	
	100					#22	13.5	28.0-74.5' QUATERNARY GLACIAL TILL (Qgt):
PURPOSE OF HOLE: To determine physical properties of embankment and foundation materials. To install porous tube piezometers in the foundation and embankment.	7		Emb	CL				
	100					#12	14.2	28.0-74.5' LEAN CLAY WITH SAND AND COBBLES (CL). About 70-75% fines with medium plasticity, medium dry strength, medium toughness; about 25% fine to coarse sand; trace to about 5% fine to coarse, hard, subrounded to rounded gravel; trace of cobbles; maximum size recovered, 3"; gray; moist; firm; interbeds of Poorly Graded Sand (SP) from 31'-32'; numerous gypsum crystals from 53.5-54.5'; no reaction with HCl.
	100					#16	15.3	
DRILL RIG: Truck-mounted CHE-85 rotary drill rig.	30			2692.0		#22	11.7	
	100					#12	15.1	
	100					#21	18.3	Bottom of Hole - 74.5'
DRILLER: Mike McNamee; USBR	40					#21	16.2	
	100					#23	15.5	
DRILLING METHOD: 0-4.5' advanced drill hole with 4-1/4" I.D. hollow stem auger (HSA) system and 5-foot-long inner barrel. 4.5-71.0' conducted SPT's (standard penetration tests); and cleaned out and advanced drill hole between SPT intervals with 4-1/4" I.D. HSA system and 5-foot-long inner barrel. 71.0-74.5' advanced drill hole with 4-1/4" I.D. HSA system and 5-foot-long inner barrel.	100					#23	15.6	
	100					#19	15.5	
	100					#23	14.8	
	100					#22	15.4	
	100					#24	17.5	
	100					#23	18.5	
	100					#16	17.7	
	100					#34	17.1	
	100					#23	17.2	
	100					#22	14.7	
	100					#21	16.1	
	100						16.2	
PROGRESS RECORD: Interval Date Drilled (ft) 5/4 0-31.0 5/5 31.0-68.5 5/6 68.5-74.5	80			2646.5				
CASING RECORD: No casing used.								
DRILLING FLUID: No drill fluid used.								
HOLE COMPLETION: (5/6/97) Backfilled drill hole with "Holeplug" (coarse grade bentonite) from bottom of hole (74.5') up to 35.0'. Placed graded sand from 35.0' up to 33.0'. Installed a 2' porous tube piezometer (tip set at 33.0') with 3/4" I.D. PVC standpipe. Surrounded piezometer and standpipe with graded sand from 33.0' up to 30.0'. Backfilled drill hole with								
COMMENTS:								

GEOLOGIC LOG OF DRILL HOLE NO. PR97-202

SHEET 2 OF 2

FEATURE: Anita Dam
LOCATION: Center Section: Crest of Dam
BEGIN: 5/4/97 FINISHED: 5/6/97
DEPTH AND ELEV. OF WATER
LEVEL AND DATE MEASURED:

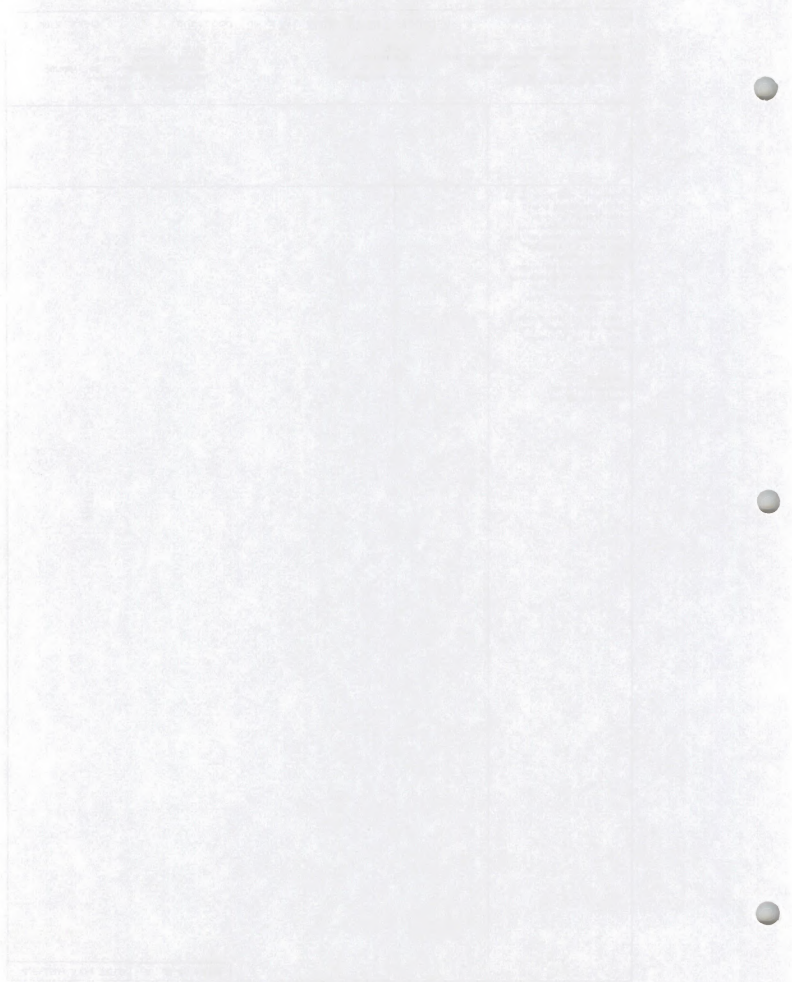
PROJECT:
COORDINATES: N E
TOTAL DEPTH: 74.5
DEPTH TO BEDROCK:

STATE: Montana
GROUND ELEVATION: 2720.0
ANGLE FROM HORIZONTAL: 90 AZIMUTH:
HOLE LOGGED BY: Jim Rogers
REVIEWED BY: L. Parish

NOTES

"Holeplug" from 30.0' up to 25.0' and placed graded sand from 25.0' up to 24.0'. Installed a 2" porous tube piezometer (tip set at 24.0') with 3/4" I.D. PVC standpipe. Surrounded piezometer and standpipe with graded sand from 24.0' up to 20.0'. Placed "Holeplug" from 20.0' up to 1.5'. Installed utility access cover set in cement grout from 1.5' up to ground surface.

LOCATION:
Dam station 7+36;
centerline of dam.



GEOLOGIC LOG OF DRILL HOLE NO. PR97-204

SHEET 1 OF 1

FEATURE: Anita Dam
 LOCATION: Center Section; Crest of Dam
 BEGIN: 5/15/97 FINISHED: 5/16/97
 DEPTH AND ELEV. OF WATER
 LEVEL AND DATE MEASURED:

PROJECT:
 COORDINATES: N E
 TOTAL DEPTH: 98.5
 DEPTH TO BEDROCK:

STATE: Montana
 GROUND ELEVATION: 2720.0
 ANGLE FROM HORIZONTAL: 90 AZIMUTH
 HOLE LOGGED BY: Jim Rogers
 REVISED BY: L. Parish

NOTES	DEPTH	% CORE RECOVERY	GEOLOGIC UNIT SYMBOL	F.L.D. CLASS/LITH	ELEVATION	SPT	% MOIST CONTENT	CLASSIFICATION AND PHYSICAL CONDITION
NOTE: All measurements are from ground surface.	49							0.0-41.0' EMBANKMENT MATERIAL (Emb):
	53					#18	14.3	0.0-41.0' LEAN CLAY WITH SAND (CL). About 75-80% fines with medium plasticity, medium dry strength, medium toughness; about 20-25% fine to medium sand, trace of fine to coarse, hard, subrounded to rounded gravel; maximum size recovered, 1"; gray; moist; firm; some gravel consist of coal fragments; no reaction with HCl.
All measurements are in feet unless noted otherwise.	100					#14		
	100					#10	16.3	41.0-98.5' QUATERNARY GLACIAL TILL (Gqt):
PURPOSE OF HOLE: To determine physical properties of embankment and foundation materials.	60					#19	15.5	41.0-98.5' LEAN CLAY WITH SAND AND COBBLES (CL). About 70-75% fines with medium plasticity, medium dry strength, medium toughness; about 25% fine to coarse sand; trace to about 5% fine to coarse, hard, subrounded to rounded gravel; trace of cobbles; maximum size recovered, 3"; gray; moist; firm; fine grass roots from 43.5-49.5'; numerous gypsum crystals from 43.5-54.5'; no reaction with HCl.
	100					#20	17.0	
DRILL RIG: Truck-mounted CME-85 rotary drill rig.	100					#21	18.1	
	100					#10	17.6	Bottom of Hole - 98.5'
DRILLER: Mike McNamee; USBR	100					#6	19.1	
	100					#25	10.4	
DRILLING METHOD: 0-4.5' advanced drill hole with 4-1/4" I.D. hollow stem auger (HSA) system and 5-foot-long inner barrel. 4.5-98.5' conducted SPT's (standard penetration tests), and cleaned out and advanced drill hole between SPT intervals with 4-1/4" I.D. HSA system and 5-foot-long inner barrel.	100					#20	16.2	
	100					#18	16.3	
PROGRESS RECORD: Interval Data Drilled (1997) (ft)	100					#18	16.0	
	100					#23	16.9	
5/15 0-31.0 5/17 31.0-76.0 5/18 76.0-98.5'	100					#18	17.2	
	100					#21	16.9	
CASING RECORD: No casing used.	100					#16	18.4	
	100					#20	17.6	
DRILLING FLUID: No drill fluid used.	100					#11	17.5	
	100					#16	19.2	
HOLE COMPLETION: (5/18/97) Backfilled with "Hoileplus" (coarse grade bentonite) from bottom of hole (98.5') up to ground surface.	100					#16	17.6	
	100					#14	16.2	
LOCATION: Dam station 4+96; centerline of dam.	100					#14	17.6	
	100					#10	18.3	
COMMENTS:	100					#1	18.6	
	100					#14	16.8	
BOTTOM OF HOLE	100					#13	16.1	
	100					#17	16.2	
2623.5	100					#12	16.0	
	100					#11	15.7	
#6	100					#12	15.8	
	100					#15	15.8	
16.1	100					#6	16.1	
	100							

THE UNIVERSITY OF
THE STATE OF NEW YORK

IN SENATE
January 10, 1910
REPORT
OF THE
COMMISSIONER OF THE
DEPARTMENT OF
EDUCATION
IN RESPONSE TO
A RESOLUTION
PASSED BY THE SENATE
JANUARY 10, 1909
ALBANY: J. B. LEECH, STATE PRINTER
1910

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1910

GEOLOGIC LOG OF DRILL HOLE NO. PR97-205

SHEET 1 OF 2

FEATURE: Anita Dam
LOCATION: Center Section; Crest of Dam
BEGIN: 5/19/97 FINISHED: 5/20/97
DEPTH AND ELEV. OF WATER
LEVEL AND DATE MEASURED:

PROJECT:
COORDINATES: N
TOTAL DEPTH: 54.5
DEPTH TO BEDROCK:

STATE: Montana
GROUND ELEVATION: 2720.0
ANGLE FROM HORIZONTAL: 90 AZIMUTH:
HOLE LOGGED BY: Jim Rogers

	DEPTH	% CORE RECOVERY	GEOLOGICAL SYMBOL FILL CLASS/LITH.	ELEVATION	SPT	NO	% MOIST CONTENT	CLASSIFICATION AND PHYSICAL CONDITION
NOTE:								
All measurements are from ground surface.	76							0-0-21.0' EMBANKMENT MATERIAL (Embl):
	93				#13		13.7	0-0-21.0' LEAN CLAY WITH SAND (CL). About 75-80% fines with medium plasticity; medium dry strength, medium toughness; about 20-25% fine to medium sand; trace of fine to coarse, hard, subrounded to rounded gravel; maximum size recovered, 1"; gray; moist; firm; some gravel consists of coal fragments; no reaction with HCl.
All measurements are in feet unless noted otherwise.	100				#17		13.5	
PURPOSE OF HOLE: To determine physical properties of embankment and foundation materials. To install porous tube piezometers at the foundation at the embankment/foundation contact.	100				#19		13.5	
	100							21.0-49.5' QUATERNARY LACUSTRINE DEPOSITS (#QZ):
	20				#34		8.7	-21.0-49.5' SANDY LEAN CLAY (CL). About 80-85% fines with low to medium plasticity, medium dry strength, low to medium toughness; about 30-35% fine to medium sand, with traces of coarse sand; trace to about 5% coarse to mostly fine, hard, subrounded to rounded gravel; maximum size recovered, 1"; brown; moist; firm; numerous gypsum crystals from -26'-42'; no reaction with HCl.
	40				#29		11.3	
	40				#25		13.4	
	40				#27		13.1	
	40				#23		12.9	49.5-54.5' QUATERNARY GLACIAL TILL (#qtz)
DRIILL RISE Truck-mounted ONE-85 rotary d'rill rig.	40				#25		14.6	49.5-54.5' LEAN CLAY WITH SAND (CL). About 70-75% fines with medium plasticity, medium dry strength, medium toughness; about 25% fine to medium sand, with a trace of coarse sand; trace to about 5% fine to coarse, hard, subrounded to rounded gravel; maximum size recovered, 2-1/2"; gray; moist; firm; no reaction with HCl.
	40				#22		14.6	
DRIILLER: Mike McNamee; USBR	40				#16		13.8	
	40				#22		15.1	
DRIILLING METHOD: 0-4.5' standpipe drill hole with 4-1/4" I.O. hollow stem auger (HSA) system and 5-foot-long inner barrel. 4.5-54.5' conducted SPT's (standard penetration tests); and cleaned out and advanced drill hole between SPT intervals with 4-1/4" I.O. HSA system and 5-foot-long inner barrel.	40				#19		15.3	Bottom of Hole = -54.5'
	40				#20		13.8	
	40							BOTTOM OF HOLE
PROGRESS RECORD: Interval Date Drilled (1997) 5/19 0-54.5								
CASING RECORD: No casing used.								
DRIILLING FLUID: No drill fluid used.								
HOLE COMPLETION: (5/20/97) Backfilled d'rill hole with "Holoplug" (coarse grade bentonite) from bottom of hole (-54.5') up to 40.0'. Placed graded sand from 40.0' up to 38.0'. Installed a #2 porous tube piezometer [tip set at 38.0'] with 3/4" I.O. PVC standpipes. Surrounded piezometer and standpipe with graded sand from 38.0' up to 34.0'. Backfilled d'rill hole with "Holoplug" from 34.0' up to 23.0' and placed graded sand from 23.0' up to 22.0'. Installed a #2								
COMMENTS:								

SHEET 1 OF 2 DRILL HOLE P#97-TOS

<p>1. The first section of the report discusses the general situation of the company and the results of the audit. It also mentions the scope of the audit and the methods used.</p>	<p>2. The second section of the report discusses the results of the audit in detail. It includes a table showing the results of the audit for each item.</p>
<p>3. The third section of the report discusses the conclusions of the audit. It mentions the overall results of the audit and the recommendations made.</p>	<p>4. The fourth section of the report discusses the recommendations made by the auditor. It includes a list of recommendations and a table showing the results of the audit for each item.</p>
<p>5. The fifth section of the report discusses the conclusions of the audit. It mentions the overall results of the audit and the recommendations made.</p>	<p>6. The sixth section of the report discusses the recommendations made by the auditor. It includes a list of recommendations and a table showing the results of the audit for each item.</p>
<p>7. The seventh section of the report discusses the conclusions of the audit. It mentions the overall results of the audit and the recommendations made.</p>	<p>8. The eighth section of the report discusses the recommendations made by the auditor. It includes a list of recommendations and a table showing the results of the audit for each item.</p>
<p>9. The ninth section of the report discusses the conclusions of the audit. It mentions the overall results of the audit and the recommendations made.</p>	<p>10. The tenth section of the report discusses the recommendations made by the auditor. It includes a list of recommendations and a table showing the results of the audit for each item.</p>

GEOLOGIC LOG OF DRILL HOLE NO. PR97-205

SHEET 2 OF 2

FEATURE: Anita Dam
LOCATION: Center Section; Crest of Dam
BEWARE: 5/18/97 FINISHED: 5/20/97
DEPTH AND ELEV. OF WATER
LEVEL AND DATE MEASURED:

PROJECT:
COORDINATES: N E
TOTAL DEPTH: 54.5
DEPTH TO BEDROCK:

STATE: Montana
GROUND ELEVATION: 2720.0
ANGLE FROM HORIZONTAL: 90 AZIMUTH
HOLE LOGGED BY: Jia Rogers
REVIEWED BY: L. Parish

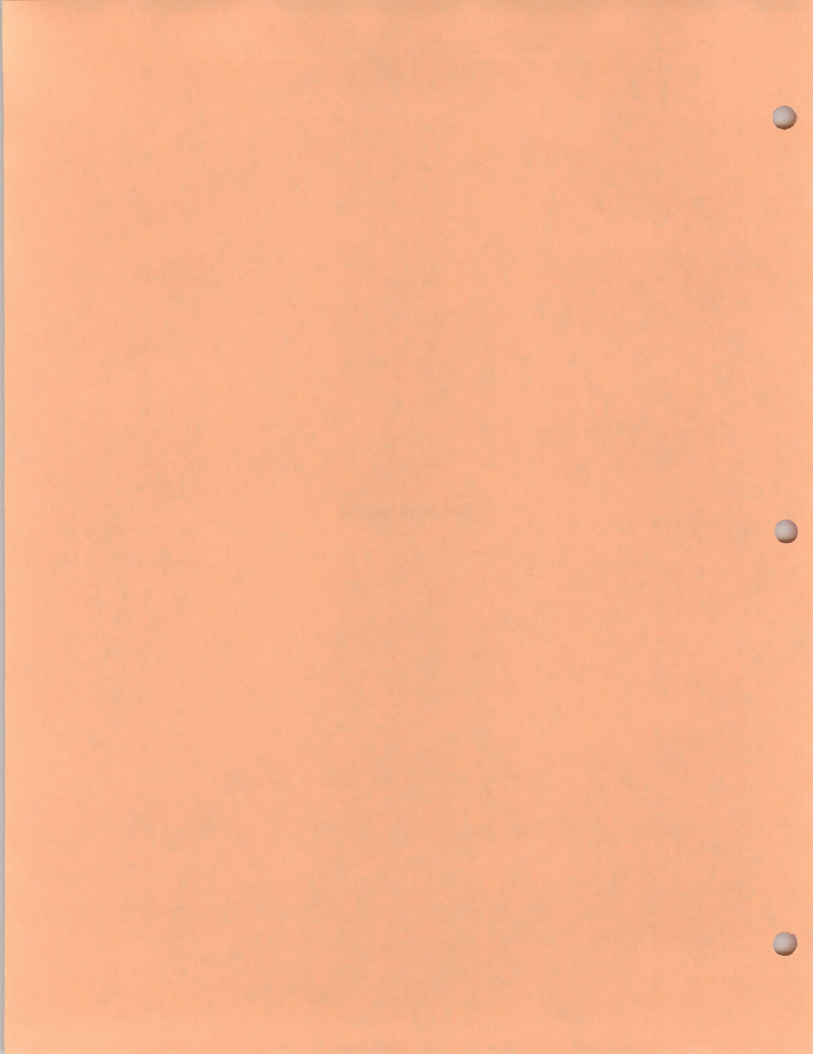
NOTES

porous tube piezometer (tip
set at 22.0') with 3/4"
I.D. PVC standpipe.
Surrounded piezometer and
standpipe with graded sand
from 22.0' up to 18.0'.
Placed "Holeslip" from
18.0' up to 4.0'.
Installed utility access
cover set in cement grout
from 4.0' up to ground
surface.

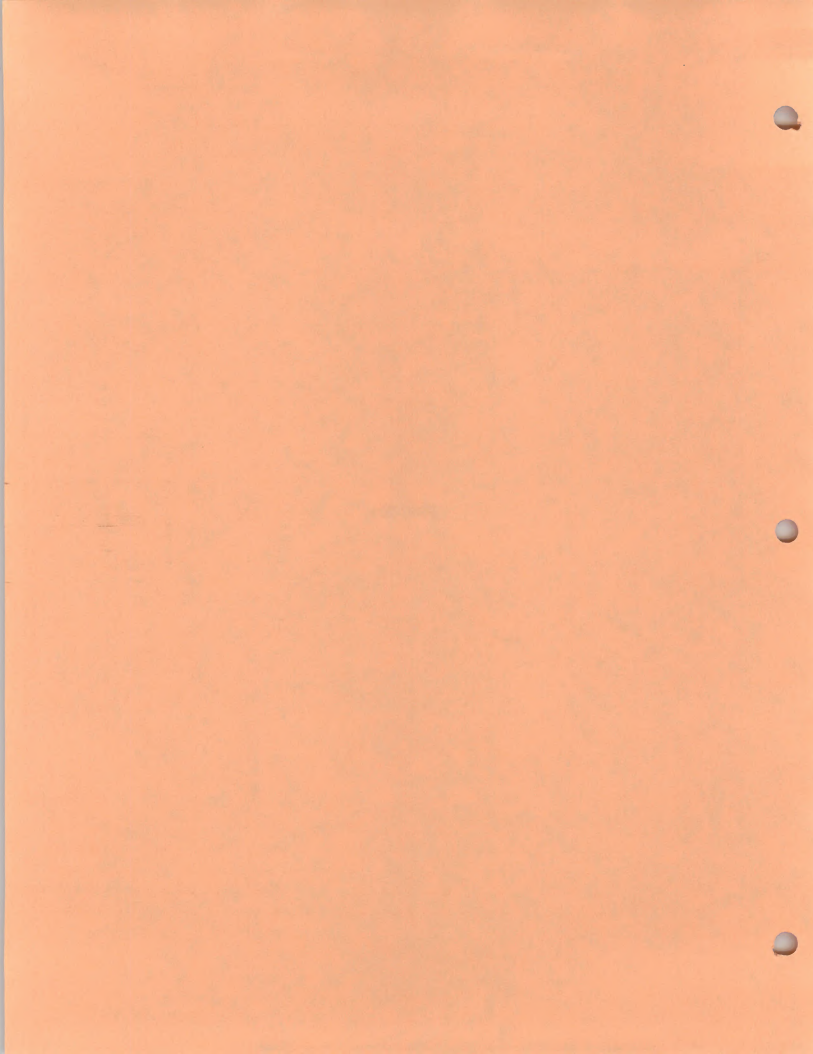
LOCATION:
Dam station 3+30;
centerline of dam.

APPENDIX C
SPT DATA SHEETS AND SUMMARY TABLE

SPT DATA SHEETS



PR97-201



SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/01/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 5.00	TO: 6.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 5.00 To 5.20	0.20	0.20	1	1
From 5.20 To 5.30	0.10	0.30	1	2
From 5.30 To 5.40	0.10	0.40	1	3
From 5.40 To 5.50	0.10	0.50	1	4
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 5.50 To 5.60	0.10	0.10	2	2
From 5.60 To 5.70	0.10	0.20	2	4
From 5.70 To 5.80	0.10	0.30	1	5
From 5.80 To 5.90	0.10	0.40	1	6
From 5.90 To 6.00	0.10	0.50	2	8
From 6.00 To 6.10	0.10	0.60	2	10
From 6.10 To 6.20	0.10	0.70	1	11
From 6.20 To 6.30	0.10	0.80	2	13
From 6.30 To 6.40	0.10	0.90	2	15
From 6.40 To 6.50	0.10	1.00	2	17

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 93

TOTAL BLOWS (after seating) 17 EXTRAPOLATED VAL. =

Description and classification of material.

DATE	DESCRIPTION	AMOUNT	BALANCE
1/1/20			
1/2/20			
1/3/20			
1/4/20			
1/5/20			
1/6/20			
1/7/20			
1/8/20			
1/9/20			
1/10/20			
1/11/20			
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1/25/20			
1/26/20			
1/27/20			
1/28/20			
1/29/20			
1/30/20			
1/31/20			

DATE	DESCRIPTION	AMOUNT	BALANCE
2/1/20			
2/2/20			
2/3/20			
2/4/20			
2/5/20			
2/6/20			
2/7/20			
2/8/20			
2/9/20			
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2/26/20			
2/27/20			
2/28/20			
2/29/20			
2/30/20			
2/31/20			

DATE	DESCRIPTION	AMOUNT	BALANCE
3/1/20			
3/2/20			
3/3/20			
3/4/20			
3/5/20			
3/6/20			
3/7/20			
3/8/20			
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3/27/20			
3/28/20			
3/29/20			
3/30/20			
3/31/20			

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/01/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 10.00	TO: 11.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 10.00 To 10.20	0.20	0.20	1	1
From 10.20 To 10.30	0.10	0.30	1	2
From 10.30 To 10.40	0.10	0.40	2	4
From 10.40 To 10.50	0.10	0.50	1	5
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 10.50 To 10.60	0.10	0.10	1	1
From 10.60 To 10.70	0.10	0.20	2	3
From 10.70 To 10.80	0.10	0.30	1	4
From 10.80 To 10.90	0.10	0.40	2	6
From 10.90 To 11.00	0.10	0.50	2	8
From 11.00 To 11.10	0.10	0.60	1	9
From 11.10 To 11.20	0.10	0.70	3	12
From 11.20 To 11.30	0.10	0.80	2	14
From 11.30 To 11.40	0.10	0.90	2	16
From 11.40 To 11.50	0.10	1.00	2	18

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	73
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TOTAL BLOWS (after seating) 18 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/01/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 15.00	TO: 16.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 15.00 To 15.10	0.10	0.10	1	1
From 15.10 To 15.20	0.10	0.20	1	2
From 15.20 To 15.30	0.10	0.30	2	4
From 15.30 To 15.40	0.10	0.40	2	6
From 15.40 To 15.50	0.10	0.50	1	7

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 15.50 To 15.60	0.10	0.10	1	1
From 15.60 To 15.70	0.10	0.20	1	2
From 15.70 To 15.80	0.10	0.30	2	4
From 15.80 To 15.90	0.10	0.40	1	5
From 15.90 To 16.00	0.10	0.50	2	7
From 16.00 To 16.10	0.10	0.60	2	9
From 16.10 To 16.20	0.10	0.70	2	11
From 16.20 To 16.30	0.10	0.80	2	13
From 16.30 To 16.40	0.10	0.90	3	16
From 16.40 To 16.50	0.10	1.00	2	18

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY 0.9

57

TOTAL BLOWS (after seating)

18

EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/01/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 35.00	TO: 36.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 35.00 To 35.10	0.10	0.10	1	1
From 35.10 To 35.20	0.10	0.20	1	2
From 35.20 To 35.30	0.10	0.30	1	3
From 35.30 To 35.40	0.10	0.40	1	4
From 35.40 To 35.50	0.10	0.50	2	6

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 35.50 To 35.60	0.10	0.10	1	1
From 35.60 To 35.70	0.10	0.20	1	2
From 35.70 To 35.80	0.10	0.30	1	3
From 35.80 To 35.90	0.10	0.40	2	5
From 35.90 To 36.00	0.10	0.50	1	6
From 36.00 To 36.10	0.10	0.60	2	8
From 36.10 To 36.20	0.10	0.70	1	9
From 36.20 To 36.30	0.10	0.80	2	11
From 36.30 To 36.40	0.10	0.90	2	13
From 36.40 To 36.50	0.10	1.00	2	15

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	87
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TOTAL BLOWS (after seating) 15 EXTRAPOLATED VAL. =

Description and
classification of
material.

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/19	1/1/19	1/1/19	1/1/19
2/1/19	2/1/19	2/1/19	2/1/19
3/1/19	3/1/19	3/1/19	3/1/19
4/1/19	4/1/19	4/1/19	4/1/19
5/1/19	5/1/19	5/1/19	5/1/19
6/1/19	6/1/19	6/1/19	6/1/19
7/1/19	7/1/19	7/1/19	7/1/19
8/1/19	8/1/19	8/1/19	8/1/19
9/1/19	9/1/19	9/1/19	9/1/19
10/1/19	10/1/19	10/1/19	10/1/19

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/19	1/1/19	1/1/19	1/1/19
2/1/19	2/1/19	2/1/19	2/1/19
3/1/19	3/1/19	3/1/19	3/1/19
4/1/19	4/1/19	4/1/19	4/1/19
5/1/19	5/1/19	5/1/19	5/1/19
6/1/19	6/1/19	6/1/19	6/1/19
7/1/19	7/1/19	7/1/19	7/1/19
8/1/19	8/1/19	8/1/19	8/1/19
9/1/19	9/1/19	9/1/19	9/1/19
10/1/19	10/1/19	10/1/19	10/1/19

1/1/19	1/1/19	1/1/19	1/1/19
2/1/19	2/1/19	2/1/19	2/1/19
3/1/19	3/1/19	3/1/19	3/1/19
4/1/19	4/1/19	4/1/19	4/1/19
5/1/19	5/1/19	5/1/19	5/1/19
6/1/19	6/1/19	6/1/19	6/1/19
7/1/19	7/1/19	7/1/19	7/1/19
8/1/19	8/1/19	8/1/19	8/1/19
9/1/19	9/1/19	9/1/19	9/1/19
10/1/19	10/1/19	10/1/19	10/1/19

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/01/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 39.50	TO: 41.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 39.50 To 39.60	0.10	0.10	1	1
From 39.60 To 39.70	0.10	0.20	1	2
From 39.70 To 39.80	0.10	0.30	1	3
From 39.80 To 39.90	0.10	0.40	1	4
From 39.90 To 40.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 40.00 To 40.10	0.10	0.10	1	1
From 40.10 To 40.20	0.10	0.20	1	2
From 40.20 To 40.30	0.10	0.30	2	4
From 40.30 To 40.40	0.10	0.40	1	5
From 40.40 To 40.50	0.10	0.50	2	7
From 40.50 To 40.60	0.10	0.60	2	9
From 40.60 To 40.70	0.10	0.70	2	11
From 40.70 To 40.80	0.10	0.80	2	13
From 40.80 To 40.90	0.10	0.90	2	15
From 40.90 To 41.00	0.10	1.00	2	17

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 17 EXTRAPOLATED VAL. =

Description and classification of material.

The following is a list of the proposed changes to the zoning ordinance for the City of [City Name]. The changes are being proposed by the Planning Commission and are subject to public hearing. The public hearing will be held on [Date] at [Time] in the [Location]. The public is invited to attend the hearing and to express their views on the proposed changes. The changes are as follows:

Item	Description	Proposed Change
1	Residential Single-Family	Change from R-1 to R-2
2	Commercial	Change from C-1 to C-2
3	Industrial	Change from I-1 to I-2
4	Office	Change from O-1 to O-2
5	Public Use	Change from P-1 to P-2

Item	Description	Proposed Change
6	Community Center	Change from CC-1 to CC-2
7	Elementary School	Change from ES-1 to ES-2
8	High School	Change from HS-1 to HS-2
9	College	Change from CO-1 to CO-2
10	University	Change from UN-1 to UN-2
11	Research and Development	Change from RD-1 to RD-2
12	Manufacturing	Change from M-1 to M-2
13	Warehouse	Change from W-1 to W-2
14	Transportation	Change from T-1 to T-2
15	Utilities	Change from U-1 to U-2

The Planning Commission has recommended the following changes to the zoning ordinance:

The Planning Commission has recommended the following changes to the zoning ordinance:

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/01/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 42.00	TO: 43.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 42.00 To 42.10	0.10	0.10	1	1
From 42.10 To 42.20	0.10	0.20	1	2
From 42.20 To 42.30	0.10	0.30	1	3
From 42.30 To 42.40	0.10	0.40	1	4
From 42.40 To 42.50	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 42.50 To 42.60	0.10	0.10	1	1
From 42.60 To 42.70	0.10	0.20	1	2
From 42.70 To 42.80	0.10	0.30	1	3
From 42.80 To 42.90	0.10	0.40	2	5
From 42.90 To 43.00	0.10	0.50	2	7
From 43.00 To 43.10	0.10	0.60	1	8
From 43.10 To 43.20	0.10	0.70	2	10
From 43.20 To 43.30	0.10	0.80	2	12
From 43.30 To 43.40	0.10	0.90	3	15
From 43.40 To 43.50	0.10	1.00	2	17

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 17 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/70	1/1/70	1/1/70	1/1/70
2/1/70	2/1/70	2/1/70	2/1/70
3/1/70	3/1/70	3/1/70	3/1/70
4/1/70	4/1/70	4/1/70	4/1/70
5/1/70	5/1/70	5/1/70	5/1/70
6/1/70	6/1/70	6/1/70	6/1/70
7/1/70	7/1/70	7/1/70	7/1/70
8/1/70	8/1/70	8/1/70	8/1/70
9/1/70	9/1/70	9/1/70	9/1/70
10/1/70	10/1/70	10/1/70	10/1/70
11/1/70	11/1/70	11/1/70	11/1/70
12/1/70	12/1/70	12/1/70	12/1/70

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/71	1/1/71	1/1/71	1/1/71
2/1/71	2/1/71	2/1/71	2/1/71
3/1/71	3/1/71	3/1/71	3/1/71
4/1/71	4/1/71	4/1/71	4/1/71
5/1/71	5/1/71	5/1/71	5/1/71
6/1/71	6/1/71	6/1/71	6/1/71
7/1/71	7/1/71	7/1/71	7/1/71
8/1/71	8/1/71	8/1/71	8/1/71
9/1/71	9/1/71	9/1/71	9/1/71
10/1/71	10/1/71	10/1/71	10/1/71
11/1/71	11/1/71	11/1/71	11/1/71
12/1/71	12/1/71	12/1/71	12/1/71

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/72	1/1/72	1/1/72	1/1/72
2/1/72	2/1/72	2/1/72	2/1/72
3/1/72	3/1/72	3/1/72	3/1/72
4/1/72	4/1/72	4/1/72	4/1/72
5/1/72	5/1/72	5/1/72	5/1/72
6/1/72	6/1/72	6/1/72	6/1/72
7/1/72	7/1/72	7/1/72	7/1/72
8/1/72	8/1/72	8/1/72	8/1/72
9/1/72	9/1/72	9/1/72	9/1/72
10/1/72	10/1/72	10/1/72	10/1/72
11/1/72	11/1/72	11/1/72	11/1/72
12/1/72	12/1/72	12/1/72	12/1/72

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/02/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 44.50	TO: 46.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 44.50 To 44.60	0.10	0.10	1	1
From 44.60 To 44.70	0.10	0.20	1	2
From 44.70 To 44.80	0.10	0.30	1	3
From 44.80 To 44.90	0.10	0.40	1	4
From 44.90 To 45.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 45.00 To 45.10	0.10	0.10	2	2
From 45.10 To 45.20	0.10	0.20	1	3
From 45.20 To 45.30	0.10	0.30	2	5
From 45.30 To 45.40	0.10	0.40	1	6
From 45.40 To 45.50	0.10	0.50	2	8
From 45.50 To 45.60	0.10	0.60	3	11
From 45.60 To 45.70	0.10	0.70	2	13
From 45.70 To 45.80	0.10	0.80	2	15
From 45.80 To 45.90	0.10	0.90	2	17
From 45.90 To 46.00	0.10	1.00	3	20

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 20 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/02/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 48.00	TO: 49.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 48.00 To 48.10	0.10	0.10	1	1
From 48.10 To 48.20	0.10	0.20	1	2
From 48.20 To 48.30	0.10	0.30	1	3
From 48.30 To 48.40	0.10	0.40	1	4
From 48.40 To 48.50	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 48.50 To 48.60	0.10	0.10	2	2
From 48.60 To 48.70	0.10	0.20	1	3
From 48.70 To 48.80	0.10	0.30	2	5
From 48.80 To 48.90	0.10	0.40	1	6
From 48.90 To 49.00	0.10	0.50	2	8
From 49.00 To 49.10	0.10	0.60	2	10
From 49.10 To 49.20	0.10	0.70	2	12
From 49.20 To 49.30	0.10	0.80	2	14
From 49.30 To 49.40	0.10	0.90	1	15
From 49.40 To 49.50	0.10	1.00	2	17

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.7 PERCENT RECOVERY 47

TOTAL BLOWS (after seating) 17 EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/02/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 50.50	TO: 52.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 50.50 To 50.60	0.10	0.10	3	3
From 50.60 To 50.70	0.10	0.20	3	6
From 50.70 To 50.80	0.10	0.30	2	8
From 50.80 To 50.90	0.10	0.40	2	10
From 50.90 To 51.00	0.10	0.50	1	11

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 51.00 To 51.10	0.10	0.10	1	1
From 51.10 To 51.20	0.10	0.20	2	3
From 51.20 To 51.30	0.10	0.30	2	5
From 51.30 To 51.40	0.10	0.40	2	7
From 51.40 To 51.50	0.10	0.50	2	9
From 51.50 To 51.60	0.10	0.60	1	10
From 51.60 To 51.70	0.10	0.70	2	12
From 51.70 To 51.80	0.10	0.80	2	14
From 51.80 To 51.90	0.10	0.90	2	16
From 51.90 To 52.00	0.10	1.00	2	18

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 18 EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/02/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 53.00	TO: 54.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 53.00 To 53.10	0.10	0.10	1	1
From 53.10 To 53.20	0.10	0.20	2	3
From 53.20 To 53.30	0.10	0.30	1	4
From 53.30 To 53.40	0.10	0.40	1	5
From 53.40 To 53.50	0.10	0.50	1	6

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 53.50 To 53.60	0.10	0.10	1	1
From 53.60 To 53.70	0.10	0.20	1	2
From 53.70 To 53.80	0.10	0.30	1	3
From 53.80 To 53.90	0.10	0.40	1	4
From 53.90 To 54.00	0.10	0.50	1	5
From 54.00 To 54.10	0.10	0.60	2	7
From 54.10 To 54.20	0.10	0.70	1	8
From 54.20 To 54.30	0.10	0.80	1	9
From 54.30 To 54.40	0.10	0.90	2	11
From 54.40 To 54.50	0.10	1.00	2	13

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	40
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TOTAL BLOWS (after seating) 13 EXTRAPOLATED VAL. =

Description and classification of material.

NO.	NAME	ADDRESS	DATE
1			
2			
3			
4			
5			

NO.	NAME	ADDRESS	DATE
1			
2			
3			
4			
5			
6			
7			
8			

NO.	NAME	ADDRESS	DATE
1			
2			

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/02/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>55.50</u>	TO: <u>57.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>55.50</u> To <u>56.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>56.00</u> To <u>57.00</u>	<u>1.00</u>	<u>1.00</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

0

TOTAL BLOWS (after seating)

0

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 1.5' (55.5-57.0')

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/00			
1/2/00			
1/3/00			
1/4/00			
1/5/00			
1/6/00			
1/7/00			
1/8/00			
1/9/00			
1/10/00			
1/11/00			
1/12/00			
1/13/00			
1/14/00			
1/15/00			
1/16/00			
1/17/00			
1/18/00			
1/19/00			
1/20/00			
1/21/00			
1/22/00			
1/23/00			
1/24/00			
1/25/00			
1/26/00			
1/27/00			
1/28/00			
1/29/00			
1/30/00			
1/31/00			

DATE	DESCRIPTION	AMOUNT	CHECK NO.
2/1/00			
2/2/00			
2/3/00			
2/4/00			
2/5/00			
2/6/00			
2/7/00			
2/8/00			
2/9/00			
2/10/00			
2/11/00			
2/12/00			
2/13/00			
2/14/00			
2/15/00			
2/16/00			
2/17/00			
2/18/00			
2/19/00			
2/20/00			
2/21/00			
2/22/00			
2/23/00			
2/24/00			
2/25/00			
2/26/00			
2/27/00			
2/28/00			
2/29/00			
2/30/00			
2/31/00			

DATE	DESCRIPTION	AMOUNT	CHECK NO.
3/1/00			
3/2/00			
3/3/00			
3/4/00			
3/5/00			
3/6/00			
3/7/00			
3/8/00			
3/9/00			
3/10/00			
3/11/00			
3/12/00			
3/13/00			
3/14/00			
3/15/00			
3/16/00			
3/17/00			
3/18/00			
3/19/00			
3/20/00			
3/21/00			
3/22/00			
3/23/00			
3/24/00			
3/25/00			
3/26/00			
3/27/00			
3/28/00			
3/29/00			
3/30/00			
3/31/00			

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/02/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 58.00	TO: 59.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 58.00 To 58.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 58.50 To 59.40	0.90	0.90	0	0
From 59.40 To 59.50	0.10	1.00	2	2
From To				
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.0 PERCENT RECOVERY 0

TOTAL BLOWS (after seating) 2 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.4' (58.0-59.4')

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/02/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 62.00

TO:

63.50

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 62.00 To 62.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 62.50 To 63.10	0.60	0.60	0	0
From 63.10 To 63.20	0.10	0.70	1	1
From 63.20 To 63.30	0.10	0.80	1	2
From 63.30 To 63.40	0.10	0.90	1	3
From 63.40 To 63.50	0.10	1.00	2	5
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
1.5 RECOVERY

100

TOTAL BLOWS (after seating)

5

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 1.1' (62.0-63.1')

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/03/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 80.00	TO: 81.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 80.00 To 80.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 80.50 To 81.50	1.00	1.00	0	0
From To				
From To				
From To				
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT 0.0 RECOVERY 0

TOTAL BLOWS (after seating) 0 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.5' (80.0-81.5') in 1 minute

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSIT
0				

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSIT
B				

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSIT

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/03/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>82.50</u>	TO: <u>84.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>82.50</u> To <u>83.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>83.00</u> To <u>83.80</u>	<u>0.80</u>	<u>0.80</u>	<u>0</u>	<u>0</u>
From <u>83.80</u> To <u>83.90</u>	<u>0.10</u>	<u>0.90</u>	<u>1</u>	<u>1</u>
From <u>83.90</u> To <u>84.00</u>	<u>0.10</u>	<u>1.00</u>	<u>1</u>	<u>2</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.0 PERCENT RECOVERY 0

TOTAL BLOWS (after seating) 2 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 1.3' (82.5-83.8')

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/03/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 85.00	TO: 86.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 85.00 To 85.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 85.50 To 86.20	0.70	0.70	0	0
From 86.20 To 86.30	0.10	0.80	2	2
From 86.30 To 86.40	0.10	0.90	2	4
From 86.40 To 86.50	0.10	1.00	1	5
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.0 PERCENT RECOVERY 0

TOTAL BLOWS (after seating) 5 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.2' (85.0-86.2')

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/03/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT ELM

STATE Montana

TEST DEPTH	FROM: 87.50	TO: 89.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 87.50 To 88.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 88.00 To 89.00	1.00	1.00	0	0
From To				
From To				
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 0.0 RECOVERY 0

TOTAL BLOWS (after seating) 0 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.5' (87.5-89.0')

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/03/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 90.00	TO: 91.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 90.00 To 90.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 90.50 To 91.50	1.00	1.00	0	0
From To				
From To				
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.0 PERCENT RECOVERY 0

TOTAL BLOWS (after seating) 0 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.5' (90.0-91.5')

No.	Name	Address	City	State	Zip	Phone	Fax
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
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99							
100							

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/04/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>92.50</u>	TO: <u>94.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>92.50</u> To <u>93.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>93.00</u> To <u>93.80</u>	<u>0.80</u>	<u>0.80</u>	<u>0</u>	<u>0</u>
From <u>93.80</u> To <u>93.90</u>	<u>0.10</u>	<u>0.90</u>	<u>1</u>	<u>1</u>
From <u>93.90</u> To <u>94.00</u>	<u>0.10</u>	<u>1.00</u>	<u>2</u>	<u>3</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.0 PERCENT RECOVERY 0

TOTAL BLOWS (after seating) 3 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 1.3' (92.5-93.8')

1. The first part of the document is a list of the names of the members of the committee.

2. The second part of the document is a list of the names of the members of the committee.

Name	Address	City	State	Zip	Phone	Fax	E-mail
John Doe	123 Main St	New York	NY	10001	(212) 555-1234	(212) 555-5678	john.doe@ny.gov
Jane Smith	456 Elm St	Los Angeles	CA	90001	(213) 555-9876	(213) 555-4321	jane.smith@ca.gov
Bob Johnson	789 Oak St	Chicago	IL	60601	(312) 555-2345	(312) 555-6789	bob.johnson@il.gov
Alice Brown	101 Pine St	Houston	TX	77001	(713) 555-3456	(713) 555-7890	alice.brown@tx.gov

Name	Address	City	State	Zip	Phone	Fax	E-mail
David Lee	234 Maple St	Phoenix	AZ	85001	(602) 555-5432	(602) 555-9012	david.lee@az.gov
Susan White	567 Cedar St	San Antonio	TX	78201	(214) 555-6543	(214) 555-0123	susan.white@tx.gov
Michael Green	890 Birch St	Dallas	TX	75201	(214) 555-7654	(214) 555-1234	michael.green@tx.gov
Emily Black	123 Elm St	San Diego	CA	92101	(619) 555-8765	(619) 555-2345	emily.black@ca.gov
Robert King	456 Oak St	Austin	TX	78701	(512) 555-9876	(512) 555-3456	robert.king@tx.gov
Jennifer Hall	789 Pine St	San Jose	CA	95101	(408) 555-0987	(408) 555-6789	jennifer.hall@ca.gov
Christopher Young	101 Cedar St	San Francisco	CA	94101	(415) 555-1098	(415) 555-7890	christopher.young@ca.gov
Amanda Scott	234 Elm St	San Jose	CA	95101	(408) 555-2109	(408) 555-8901	amanda.scott@ca.gov

Name	Address	City	State	Zip	Phone	Fax	E-mail
Daniel Taylor	567 Oak St	San Jose	CA	95101	(408) 555-3210	(408) 555-9012	daniel.taylor@ca.gov
Michelle Adams	890 Pine St	San Jose	CA	95101	(408) 555-4321	(408) 555-0123	michelle.adams@ca.gov
Kevin Baker	123 Elm St	San Jose	CA	95101	(408) 555-5432	(408) 555-1234	kevin.baker@ca.gov
Nicole Evans	456 Oak St	San Jose	CA	95101	(408) 555-6543	(408) 555-2345	nicole.evans@ca.gov

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/04/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECTBLM

STATE Montana

TEST DEPTH	FROM: 95.00	TO: 96.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 95.00 To 95.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 95.50 To 96.20	0.70	0.70	0	0
From 96.20 To 96.30	0.10	0.80	1	1
From 96.30 To 96.40	0.10	0.90	2	3
From 96.40 To 96.50	0.10	1.00	1	4
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 0.0 RECOVERY 0

TOTAL BLOWS (after seating) 4 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.2' (95.0-96.2')

SPT DATA SHEET

HOLE NO. PR97-201

DATE

05/04/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 97.50

TO: 99.00

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 97.50 To 98.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 98.00 To 99.00	1.00	1.00	0	0
From To				
From To				
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY

0

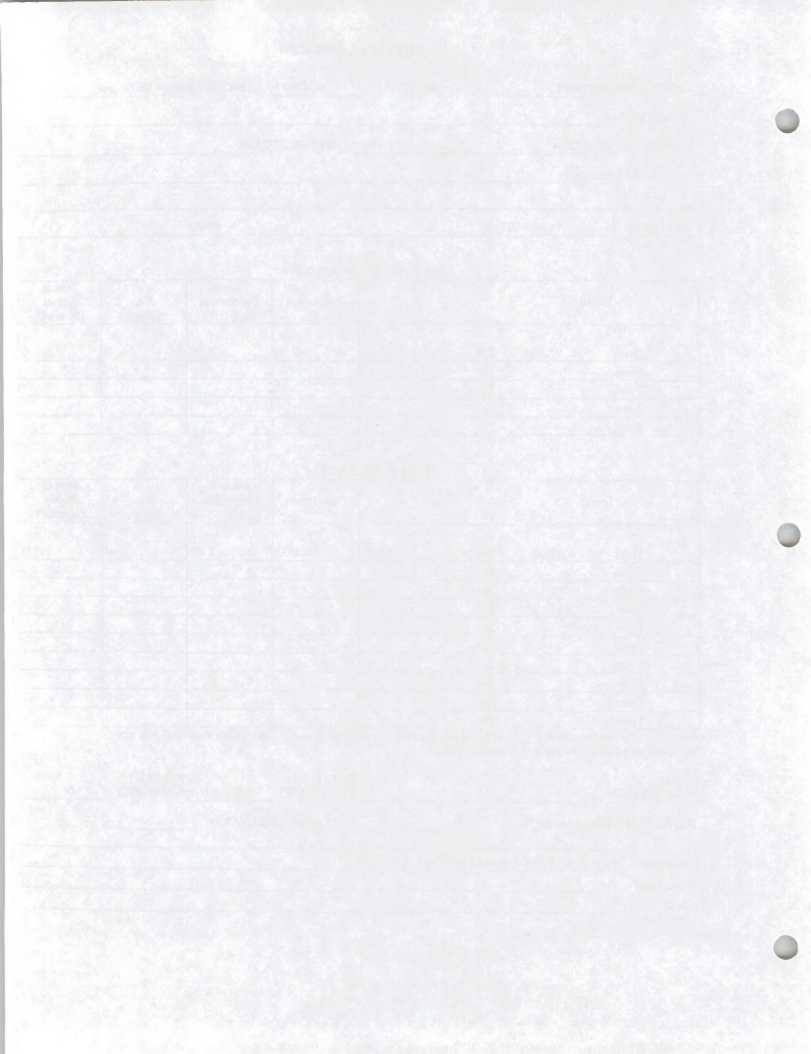
TOTAL BLOWS (after seating)

0

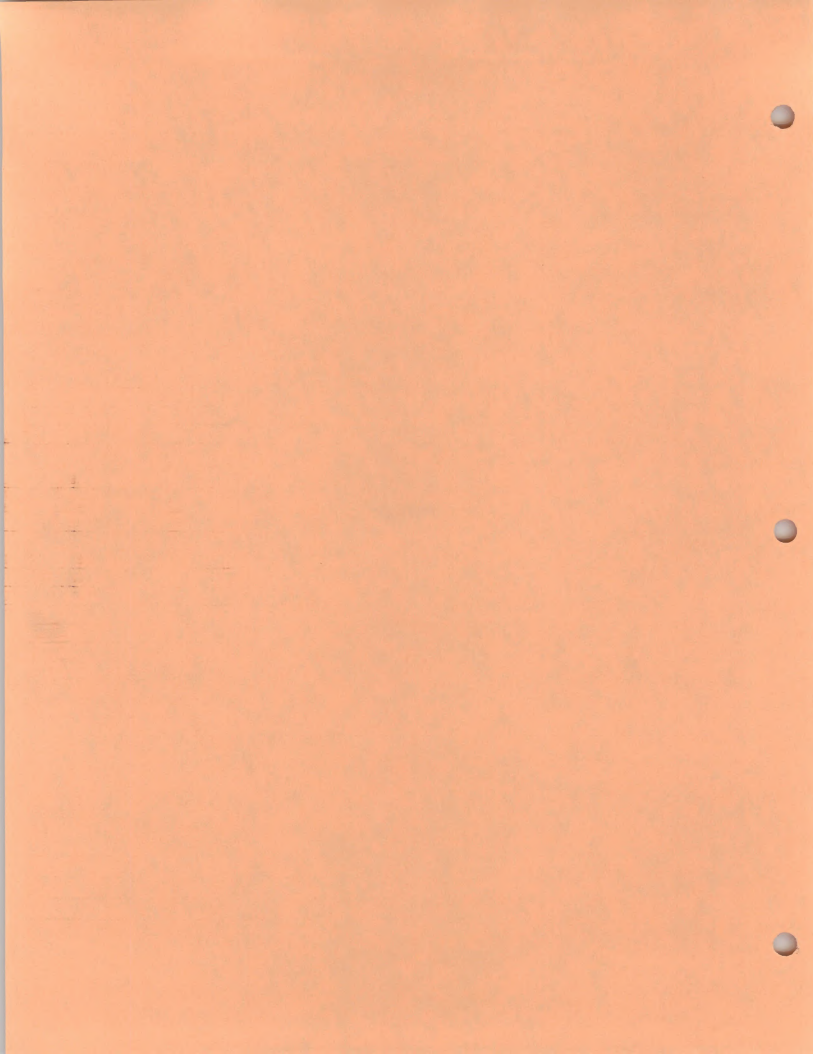
EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.5' (97.5-99.0')



PR97-202



SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/04/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 4.50

TO:

6.00

SEATING PENETRATION

SEATING PENETRATION							
Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	4.50	To	4.80	0.30	0.30	0	0
From	4.80	To	5.00	0.20	0.50	1	1
From		To					
From		To					
From		To					

TEST PENETRATION

				TEST PENETRATION			
Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	5.00	To	5.20	0.20	0.20	1	1
From	5.20	To	5.30	0.10	0.30	1	2
From	5.30	To	5.40	0.10	0.40	1	3
From	5.40	To	5.50	0.10	0.50	1	4
From	5.50	To	5.60	0.10	0.60	1	5
From	5.60	To	5.70	0.10	0.70	2	7
From	5.70	To	5.80	0.10	0.80	2	9
From	5.80	To	5.90	0.10	0.90	1	10
From	5.90	To	6.00	0.10	1.00	2	12
From		To					

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

80

TOTAL BLOWS (after seating)

12

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.3' (4.5-4.8')

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/04/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 9.50

TO: 11.00

SEATING PENETRATION

Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	9.50	To	9.70	0.20	0.20	0	0
From	9.70	To	9.80	0.10	0.30	1	1
From	9.80	To	9.90	0.10	0.40	1	2
From	9.90	To	10.00	0.10	0.50	1	3
From		To					

TEST PENETRATION

Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	10.00	To	10.10	0.10	0.10	1	1
From	10.10	To	10.20	0.10	0.20	1	2
From	10.20	To	10.30	0.10	0.30	1	3
From	10.30	To	10.40	0.10	0.40	1	4
From	10.40	To	10.50	0.10	0.50	2	6
From	10.50	To	10.60	0.10	0.60	1	7
From	10.60	To	10.70	0.10	0.70	1	8
From	10.70	To	10.80	0.10	0.80	2	10
From	10.80	To	10.90	0.10	0.90	2	12
From	10.90	To	11.00	0.10	1.00	3	15

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

100

TOTAL BLOWS (after seating)

15

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.2' (9.5-9.7')

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/04/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 14.50

TO:

16.00

SEATING PENETRATION

Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	14.50	To	14.60	0.10	0.10	1	1
From	14.60	To	14.70	0.10	0.20	5	6
From	14.70	To	14.80	0.10	0.30	2	8
From	14.80	To	14.90	0.10	0.40	2	10
From	14.90	To	15.00	0.10	0.50	3	13

TEST PENETRATION

Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	15.00	To	15.10	0.10	0.10	3	3
From	15.10	To	15.20	0.10	0.20	3	6
From	15.20	To	15.30	0.10	0.30	3	9
From	15.30	To	15.40	0.10	0.40	3	12
From	15.40	To	15.50	0.10	0.50	1	13
From	15.50	To	15.60	0.10	0.60	1	14
From	15.60	To	15.70	0.10	0.70	2	16
From	15.70	To	15.80	0.10	0.80	1	17
From	15.80	To	15.90	0.10	0.90	2	19
From	15.90	To	16.00	0.10	1.00	3	22

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL

RECOVERY

PERCENT

0.1 RECOVERY

7

TOTAL BLOWS (after seating)

22

EXTRAPOLATED VAL. =

Description and
classification of
material.

Probably a rock in front of sampler

Year	Month	Day	Time	Location	Remarks
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Year	Month	Day	Time	Location	Remarks
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Year	Month	Day	Time	Location	Remarks
19					
20					
21					
22					
23					
24					
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26					
27					
28					
29					
30					
31					

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/04/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 19.50

TO:

21.00

SEATING PENETRATION

DEPTH				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	19.50	To	19.70	0.20	0.20	0	0
From	19.70	To	19.90	0.20	0.40	1	1
From	19.90	To	20.00	0.10	0.50	1	2
From		To					
From		To					

TEST PENETRATION

				TEST PENETRATION			
Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	20.00	To	20.10	0.10	0.10	1	1
From	20.10	To	20.20	0.10	0.20	1	2
From	20.20	To	20.30	0.10	0.30	1	3
From	20.30	To	20.40	0.10	0.40	1	4
From	20.40	To	20.50	0.10	0.50	1	5
From	20.50	To	20.60	0.10	0.60	1	6
From	20.60	To	20.70	0.10	0.70	2	8
From	20.70	To	20.80	0.10	0.80	1	9
From	20.80	To	20.90	0.10	0.90	2	11
From	20.90	To	21.00	0.10	1.00	1	12

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

87

TOTAL BLOWS (after seating)

12

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.2' (19.5-19.7')

UNIT 1

NAME: _____

DATE: _____

PERIOD: _____

TEACHER: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

STUDENT: _____

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SPT DATA SHEET

HOLE NO. FR97-202

DATE

05/04/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 24.50

TO:

26.00

SEATING PENETRATION

Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	24.50	To	24.60	0.10	0.10	1	1
From	24.60	To	24.70	0.10	0.20	1	2
From	24.70	To	24.80	0.10	0.30	1	3
From	24.80	To	24.90	0.10	0.40	1	4
From	24.90	To	25.00	0.10	0.50	1	5

TEST PENETRATION

Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	25.00	To	25.10	0.10	0.10	1	1
From	25.10	To	25.20	0.10	0.20	1	2
From	25.20	To	25.30	0.10	0.30	1	3
From	25.30	To	25.40	0.10	0.40	2	5
From	25.40	To	25.50	0.10	0.50	1	6
From	25.50	To	25.60	0.10	0.60	2	8
From	25.60	To	25.70	0.10	0.70	1	9
From	25.70	To	25.80	0.10	0.80	2	11
From	25.80	To	25.90	0.10	0.90	2	13
From	25.90	To	26.00	0.10	1.00	3	16

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION 1.50

TOTAL
RECOVERY 1.3 PERCENT
RECOVERY 87

TOTAL BLOWS (after seating)

16

EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/04/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 29.50

TO:

31.00

SEATING PENETRATION

Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	29.50	To	29.60	0.10	0.10	1	1
From	29.60	To	29.70	0.10	0.20	1	2
From	29.70	To	29.80	0.10	0.30	1	3
From	29.80	To	29.90	0.10	0.40	2	5
From	29.90	To	30.00	0.10	0.50	1	6

TEST PENETRATION

Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	30.00	To	30.10	0.10	0.10	1	1
From	30.10	To	30.20	0.10	0.20	2	3
From	30.20	To	30.30	0.10	0.30	2	5
From	30.30	To	30.40	0.10	0.40	2	7
From	30.40	To	30.50	0.10	0.50	2	9
From	30.50	To	30.60	0.10	0.60	2	11
From	30.60	To	30.70	0.10	0.70	2	13
From	30.70	To	30.80	0.10	0.80	3	16
From	30.80	To	30.90	0.10	0.90	3	19
From	30.90	To	31.00	0.10	1.00	3	22

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

100

TOTAL BLOWS (after seating)

22

EXTRAPOLATED VAL. =

Description and
classification of
material.

10-12	13-15	16-18	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	76-78	79-81	82-84	85-87	88-90	91-93	94-96	97-99	100-102	103-105	106-108	109-111	112-114	115-117	118-120	121-123	124-126	127-129	130-132	133-135	136-138	139-141	142-144	145-147	148-150	151-153	154-156	157-159	160-162	163-165	166-168	169-171	172-174	175-177	178-180	181-183	184-186	187-189	190-192	193-195	196-198	199-201	202-204	205-207	208-210	211-213	214-216	217-219	220-222	223-225	226-228	229-231	232-234	235-237	238-240	241-243	244-246	247-249	250-252	253-255	256-258	259-261	262-264	265-267	268-270	271-273	274-276	277-279	280-282	283-285	286-288	289-291	292-294	295-297	298-300	301-303	304-306	307-309	310-312	313-315	316-318	319-321	322-324	325-327	328-330	331-333	334-336	337-339	340-342	343-345	346-348	349-351	352-354	355-357	358-360	361-363	364-366	367-369	370-372	373-375	376-378	379-381	382-384	385-387	388-390	391-393	394-396	397-399	400-402	403-405	406-408	409-411	412-414	415-417	418-420	421-423	424-426	427-429	430-432	433-435	436-438	439-441	442-444	445-447	448-450	451-453	454-456	457-459	460-462	463-465	466-468	469-471	472-474	475-477	478-480	481-483	484-486	487-489	490-492	493-495	496-498	499-501	502-504	505-507	508-510	511-513	514-516	517-519	520-522	523-525	526-528	529-531	532-534	535-537	538-540	541-543	544-546	547-549	550-552	553-555	556-558	559-561	562-564	565-567	568-570	571-573	574-576	577-579	580-582	583-585	586-588	589-591	592-594	595-597	598-600	601-603	604-606	607-609	610-612	613-615	616-618	619-621	622-624	625-627	628-630	631-633	634-636	637-639	640-642	643-645	646-648	649-651	652-654	655-657	658-660	661-663	664-666	667-669	670-672	673-675	676-678	679-681	682-684	685-687	688-690	691-693	694-696	697-699	700-702	703-705	706-708	709-711	712-714	715-717	718-720	721-723	724-726	727-729	730-732	733-735	736-738	739-741	742-744	745-747	748-750	751-753	754-756	757-759	760-762	763-765	766-768	769-771	772-774	775-777	778-780	781-783	784-786	787-789	790-792	793-795	796-798	799-801	802-804	805-807	808-810	811-813	814-816	817-819	820-822	823-825	826-828	829-831	832-834	835-837	838-840	841-843	844-846	847-849	850-852	853-855	856-858	859-861	862-864	865-867	868-870	871-873	874-876	877-879	880-882	883-885	886-888	889-891	892-894	895-897	898-900	901-903	904-906	907-909	910-912	913-915	916-918	919-921	922-924	925-927	928-930	931-933	934-936	937-939	940-942	943-945	946-948	949-951	952-954	955-957	958-960	961-963	964-966	967-969	970-972	973-975	976-978	979-981	982-984	985-987	988-990	991-993	994-996	997-999	1000-1002	1003-1005	1006-1008	1009-1011	1012-1014	1015-1017	1018-1020	1021-1023	1024-1026	1027-1029	1030-1032	1033-1035	1036-1038	1039-1041	1042-1044	1045-1047	1048-1050	1051-1053	1054-1056	1057-1059	1060-1062	1063-1065	1066-1068	1069-1071	1072-1074	1075-1077	1078-1080	1081-1083	1084-1086	1087-1089	1090-1092	1093-1095	1096-1098	1099-1101	1102-1104	1105-1107	1108-1110	1111-1113	1114-1116	1117-1119	1120-1122	1123-1125	1126-1128	1129-1131	1132-1134	1135-1137	1138-1140	1141-1143	1144-1146	1147-1149	1150-1152	1153-1155	1156-1158	1159-1161	1162-1164	1165-1167	1168-1170	1171-1173	1174-1176	1177-1179	1180-1182	1183-1185	1186-1188	1189-1191	1192-1194	1195-1197	1198-1199	1200-1202	1203-1205	1206-1208	1209-1211	1212-1214	1215-1217	1218-1220	1221-1223	1224-1226	1227-1229	1230-1232	1233-1235	1236-1238	1239-1241	1242-1244	1245-1247	1248-1250	1251-1253	1254-1256	1257-1259	1260-1262	1263-1265	1266-1268	1269-1271	1272-1274	1275-1277	1278-1280	1281-1283	1284-1286	1287-1289	1290-1292	1293-1295	1296-1298	1299-1301	1302-1304	1305-1307	1308-1310	1311-1313	1314-1316	1317-1319	1320-1322	1323-1325	1326-1328	1329-1331	1332-1334	1335-1337	1338-1340	1341-1343	1344-1346	1347-1349	1350-1352	1353-1355	1356-1358	1359-1361	1362-1364	1365-1367	1368-1370	1371-1373	1374-1376	1377-1379	1380-1382	1383-1385	1386-1388	1389-1391	1392-1394	1395-1397	1398-1399	1400-1402	1403-1405	1406-1408	1409-1411	1412-1414	1415-1417	1418-1420	1421-1423	1424-1426	1427-1429	1430-1432	1433-1435	1436-1438	1439-1441	1442-1444	1445-1447	1448-1450	1451-1453	1454-1456	1457-1459	1460-1462	1463-1465	1466-1468	1469-1471	1472-1474	1475-1477	1478-1480	1481-1483	1484-1486	1487-1489	1490-1492	1493-1495	1496-1498	1499-1501	1502-1504	1505-1507	1508-1510	1511-1513	1514-1516	1517-1519	1520-1522	1523-1525	1526-1528	1529-1531	1532-1534	1535-1537	1538-1540	1541-1543	1544-1546	1547-1549	1550-1552	1553-1555	1556-1558	1559-1561	1562-1564	1565-1567	1568-1570	1571-1573	1574-1576	1577-1579	1580-1582	1583-1585	1586-1588	1589-1591	1592-1594	1595-1597	1598-1599	1600-1602	1603-1605	1606-1608	1609-1611	1612-1614	1615-1617	1618-1620	1621-1623	1624-1626	1627-1629	1630-1632	1633-1635	1636-1638	1639-1641	1642-1644	1645-1647	1648-1650	1651-1653	1654-1656	1657-1659	1660-1662	1663-1665	1666-1668	1669-1671	1672-1674	1675-1677	1678-1680	1681-1683	1684-1686	1687-1689	1690-1692	1693-1695	1696-1698	1699-1701	1702-1704	1705-1707	1708-1710	1711-1713	1714-1716	1717-1719	1720-1722	1723-1725	1726-1728	1729-1731	1732-1734	1735-1737	1738-1740	1741-1743	1744-1746	1747-1749	1750-1752	1753-1755	1756-1758	1759-1761	1762-1764	1765-1767	1768-1770	1771-1773	1774-1776	1777-1779	1780-1782	1783-1785	1786-1788	1789-1791	1792-1794	1795-1797	1798-1799	1800-1802	1803-1805	1806-1808	1809-1811	1812-1814	1815-1817	1818-1820	1821-1823	1824-1826	1827-1829	1830-1832	1833-1835	1836-1838	1839-1841	1842-1844	1845-1847	1848-1850	1851-1853	1854-1856	1857-1859	1860-1862	1863-1865	1866-1868	1869-1871	1872-1874	1875-1877	1878-1880	1881-1883	1884-1886	1887-1889	1890-1892	1893-1895	1896-1898	1899-1901	1902-1904	1905-1907	1908-1910	1911-1913	1914-1916	1917-1919	1920-1922	1923-1925	1926-1928	1929-1931	1932-1934	1935-1937	1938-1940	1941-1943	1944-1946	1947-1949	1950-1952	1953-1955	1956-1958	1959-1961	1962-1964	1965-1967	1968-1970	1971-1973	1974-1976	1977-1979	1980-1982	1983-1985	1986-1988	1989-1991	1992-1994	1995-1997	1998-1999	2000-2002	2003-2005	2006-2008	2009-2011	2012-2014	2015-2017	2018-2020	2021-2023	2024-2026	2027-2029	2030-2032	2033-2035	2036-2038	2039-2041	2042-2044	2045-2047	2048-2050	2051-2053	2054-2056	2057-2059	2060-2062	2063-2065	2066-2068	2069-2071	2072-2074	2075-2077	2078-2080	2081-2083	2084-2086	2087-2089	2090-2092	2093-2095	2096-2098	2099-2101	2102-2104	2105-2107	2108-2110	2111-2113	2114-2116	2117-2119	2120-2122	2123-2125	2126-2128	2129-2131	2132-2134	2135-2137	2138-2140	2141-2143	2144-2146	2147-2149	2150-2152	2153-2155	2156-2158	2159-2161	2162-2164	2165-2167	2168-2170	2171-2173	2174-2176	2177-2179	2180-2182	2183-2185	2186-2188	2189-2191	2192-2194	2195-2197	2198-2199	2200-2202	2203-2205	2206-2208	2209-2211	2212-2214	2215-2217	2218-2220	2221-2223	2224-2226	2227-2229	2230-2232	2233-2235	2236-2238	2239-2241	2242-2244	2245-2247	2248-2250	2251-2253	2254-2256	2257-2259	2260-2262	2263-2265	2266-2268	2269-2271	2272-2274	2275-2277	2278-2280	2281-2283	2284-2286	2287-2289	2290-2292	2293-2295	2296-2298	2299-2301	2302-2304	2305-2307	2308-2310	2311-2313	2314-2316	2317-2319	2320-2322	2323-2325	2326-2328	2329-2331	2332-2334	2335-2337	2338-2340	2341-2343	2344-2346	2347-2349	2350-2352	2353-2355	2356-2358	2359-2361	2362-2364	2365-2367	2368-2370	2371-2373	2374-2376	2377-2379	2380-2382	2383-2385	2386-2388	2389-2391	2392-2394	2395-2397	2398-2399	2400-2402	2403-2405	2406-2408	2409-2411	2412-2414	2415-2417	2418-2420	2421-2423	2424-2426	2427-2429	2430-2432	2433-2435	2436-2438	2439-2441	2442-2444	2445-2447	2448-2450	2451-2453	2454-2456	2457-2459	2460-2462	2463-2465	2466-2468	2469-2471	2472-2474	2475-2477	2478-2480	2481-2483	2484-2486	2487-2489	2490-2492	2493-2495	2496-2498	2499-2501	2502-2504	2505-2507	2508-2510	2511-2513	2514-2516	2517-2519	2520-2522	2523-2525	2526-2528	2529-2531	2532-2534	2535-2537	2538-2540	2541-2543	2544-2546	2547-2549	2550-2552	2553-2555	2556-2558	2559-2561	2562-2564	2565-2567	2568-2570	2571-2573	2574-2576	2577-2579	2580-2582	2583-2585	2586-2588	2589-2591	2592-2594	2595-2597	2598-2599	2600-2602	2603-2605	2606-2608	2609-2611	2612-2614	2615-2617	2618-2620	2621-2623	2624-2626	2627-2629	2630-2632	2633-2635	2636-2638	2639-2641	2642-2644	2645-2647	2648-2650	2651-2653	2654-2656	2657-2659	2660-2662	2663-2665	2666-2668	2669-2671	2672-2674	2675-2677	2678-2680	2681-2683	2684-2686	2687-2689	2690-2692	2693-2695	2696-2698	2699-2701	2702-2704	2705-2707	2708-2710	2711-2713	2714-2716	2717-2719	2720-2722	2723-2725	2726-2728	2729-2731	2732-2734	2735-2737	2738-2740	2741-2743	2744-2746	2747-2749	2750-2752	2753-2755	2756-2758	2759-2761	2762-2764	2765-2767	2768-2770	2771-2773	2774-2776	2777-2779	2780-2782	2783-2785	2786-2788	2789-2791	2792-2794	2795-2797	2798-2799	2800-280
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SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 32.00

TO:

33.50

SEATING PENETRATION

				SOUNDING PENETRATION			
Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	32.00	To	32.10	0.10	0.10	1	1
From	32.10	To	32.20	0.10	0.20	1	2
From	32.20	To	32.30	0.10	0.30	1	3
From	32.30	To	32.40	0.10	0.40	1	4
From	32.40	To	32.50	0.10	0.50	1	5

TEST PENETRATION

				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
Depth							
From	32.50	To	32.60	0.10	0.10	1	1
From	32.60	To	32.70	0.10	0.20	1	2
From	32.70	To	32.80	0.10	0.30	1	3
From	32.80	To	32.90	0.10	0.40	1	4
From	32.90	To	33.00	0.10	0.50	1	5
From	33.00	To	33.10	0.10	0.60	1	6
From	33.10	To	33.20	0.10	0.70	1	7
From	33.20	To	33.30	0.10	0.80	1	8
From	33.30	To	33.40	0.10	0.90	2	10
From	33.40	To	33.50	0.10	1.00	2	12

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

80

TOTAL BLOWS (after seating)

12

EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 34.50

TO:

36.00

SEATING PENETRATION

				SOUNDING PENETRATION			
Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	34.50	To	34.60	0.10	0.10	1	1
From	34.60	To	34.70	0.10	0.20	1	2
From	34.70	To	34.80	0.10	0.30	1	3
From	34.80	To	34.90	0.10	0.40	1	4
From	34.90	To	35.00	0.10	0.50	2	6

TEST PENETRATION

TEST PENETRATION				Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
Depth				Penetration *		
From	35.00	To	35.10	0.10	0.10	1
From	35.10	To	35.20	0.10	0.20	1
From	35.20	To	35.30	0.10	0.30	1
From	35.30	To	35.40	0.10	0.40	2
From	35.40	To	35.50	0.10	0.50	2
From	35.50	To	35.60	0.10	0.60	2
From	35.60	To	35.70	0.10	0.70	3
From	35.70	To	35.80	0.10	0.80	3
From	35.80	To	35.90	0.10	0.90	3
From	35.90	To	36.00	0.10	1.00	3

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL

PENETRATION

1.50

TOTAL

RECOVERY

PERCENT

RECOVERY

100

TOTAL BLOWS (after seating)

21

EXTRAPOLATED VAL. =

Description and
classification of
material.

UNIT 1: THE HISTORY OF THE UNITED STATES	UNIT 2: THE AMERICAN WEST	UNIT 3: THE AMERICAN SOUTH	UNIT 4: THE AMERICAN NORTH
1. The American Revolution	1. The American West	1. The American South	1. The American North
2. The American Civil War	2. The American West	2. The American South	2. The American North
3. The American Industrial Revolution	3. The American West	3. The American South	3. The American North
4. The American Progressive Era	4. The American West	4. The American South	4. The American North
5. The American New Deal	5. The American West	5. The American South	5. The American North
6. The American Cold War	6. The American West	6. The American South	6. The American North
7. The American Vietnam War	7. The American West	7. The American South	7. The American North
8. The American Vietnam War	8. The American West	8. The American South	8. The American North
9. The American Vietnam War	9. The American West	9. The American South	9. The American North
10. The American Vietnam War	10. The American West	10. The American South	10. The American North

UNIT 1: THE HISTORY OF THE UNITED STATES	UNIT 2: THE AMERICAN WEST	UNIT 3: THE AMERICAN SOUTH	UNIT 4: THE AMERICAN NORTH
1. The American Revolution	1. The American West	1. The American South	1. The American North
2. The American Civil War	2. The American West	2. The American South	2. The American North
3. The American Industrial Revolution	3. The American West	3. The American South	3. The American North
4. The American Progressive Era	4. The American West	4. The American South	4. The American North
5. The American New Deal	5. The American West	5. The American South	5. The American North
6. The American Cold War	6. The American West	6. The American South	6. The American North
7. The American Vietnam War	7. The American West	7. The American South	7. The American North
8. The American Vietnam War	8. The American West	8. The American South	8. The American North
9. The American Vietnam War	9. The American West	9. The American South	9. The American North
10. The American Vietnam War	10. The American West	10. The American South	10. The American North

UNIT 1: THE HISTORY OF THE UNITED STATES	UNIT 2: THE AMERICAN WEST	UNIT 3: THE AMERICAN SOUTH	UNIT 4: THE AMERICAN NORTH
1. The American Revolution	1. The American West	1. The American South	1. The American North
2. The American Civil War	2. The American West	2. The American South	2. The American North
3. The American Industrial Revolution	3. The American West	3. The American South	3. The American North
4. The American Progressive Era	4. The American West	4. The American South	4. The American North
5. The American New Deal	5. The American West	5. The American South	5. The American North
6. The American Cold War	6. The American West	6. The American South	6. The American North
7. The American Vietnam War	7. The American West	7. The American South	7. The American North
8. The American Vietnam War	8. The American West	8. The American South	8. The American North
9. The American Vietnam War	9. The American West	9. The American South	9. The American North
10. The American Vietnam War	10. The American West	10. The American South	10. The American North

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 37.00

TO:

38.50

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 37.00 To 37.10	0.10	0.10	1	1
From 37.10 To 37.20	0.10	0.20	1	2
From 37.20 To 37.30	0.10	0.30	1	3
From 37.30 To 37.40	0.10	0.40	1	4
From 37.40 To 37.50	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 37.50 To 37.60	0.10	0.10	2	2
From 37.60 To 37.70	0.10	0.20	1	3
From 37.70 To 37.80	0.10	0.30	2	5
From 37.80 To 37.90	0.10	0.40	2	7
From 37.90 To 38.00	0.10	0.50	2	9
From 38.00 To 38.10	0.10	0.60	2	11
From 38.10 To 38.20	0.10	0.70	2	13
From 38.20 To 38.30	0.10	0.80	2	15
From 38.30 To 38.40	0.10	0.90	3	18
From 38.40 To 38.50	0.10	1.00	3	21

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

100

TOTAL BLOWS (after seating)

21

EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 39.50	TO: 41.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 39.50 To 39.60	0.10	0.10	1	1
From 39.60 To 39.70	0.10	0.20	1	2
From 39.70 To 39.80	0.10	0.30	1	3
From 39.80 To 39.90	0.10	0.40	1	4
From 39.90 To 40.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 40.00 To 40.10	0.10	0.10	1	1
From 40.10 To 40.20	0.10	0.20	2	3
From 40.20 To 40.30	0.10	0.30	2	5
From 40.30 To 40.40	0.10	0.40	2	7
From 40.40 To 40.50	0.10	0.50	2	9
From 40.50 To 40.60	0.10	0.60	3	12
From 40.60 To 40.70	0.10	0.70	2	14
From 40.70 To 40.80	0.10	0.80	3	17
From 40.80 To 40.90	0.10	0.90	3	20
From 40.90 To 41.00	0.10	1.00	3	23

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 23 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 42.00	TO: 43.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 42.00 To 42.10	0.10	0.10	1	1
From 42.10 To 42.20	0.10	0.20	1	2
From 42.20 To 42.30	0.10	0.30	1	3
From 42.30 To 42.40	0.10	0.40	1	4
From 42.40 To 42.50	0.10	0.50	2	6

TEST PENETRATION

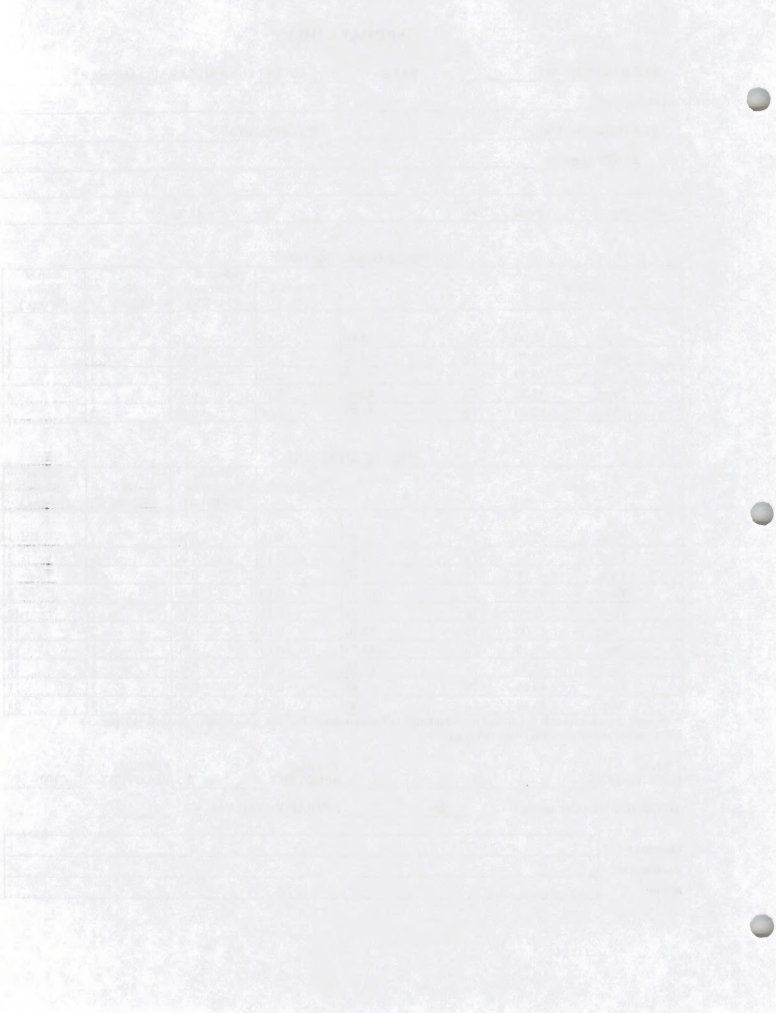
Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 42.50 To 42.60	0.10	0.10	1	1
From 42.60 To 42.70	0.10	0.20	2	3
From 42.70 To 42.80	0.10	0.30	2	5
From 42.80 To 42.90	0.10	0.40	3	8
From 42.90 To 43.00	0.10	0.50	2	10
From 43.00 To 43.10	0.10	0.60	2	12
From 43.10 To 43.20	0.10	0.70	3	15
From 43.20 To 43.30	0.10	0.80	3	18
From 43.30 To 43.40	0.10	0.90	3	21
From 43.40 To 43.50	0.10	1.00	3	24

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 24 EXTRAPOLATED VAL. =

Description and classification of material.



SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 44.50	TO: 46.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 44.50 To 44.60	0.10	0.10	1	1
From 44.60 To 44.70	0.10	0.20	1	2
From 44.70 To 44.80	0.10	0.30	1	3
From 44.80 To 44.90	0.10	0.40	1	4
From 44.90 To 45.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 45.00 To 45.10	0.10	0.10	1	1
From 45.10 To 45.20	0.10	0.20	2	3
From 45.20 To 45.30	0.10	0.30	2	5
From 45.30 To 45.40	0.10	0.40	2	7
From 45.40 To 45.50	0.10	0.50	2	9
From 45.50 To 45.60	0.10	0.60	2	11
From 45.60 To 45.70	0.10	0.70	3	14
From 45.70 To 45.80	0.10	0.80	2	16
From 45.80 To 45.90	0.10	0.90	3	19
From 45.90 To 46.00	0.10	1.00	4	23

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 23 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 47.00

TO: 48.50

SEATING PENETRATION

Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	47.00	To	47.10	0.10	0.10	1	1
From	47.10	To	47.20	0.10	0.20	1	2
From	47.20	To	47.30	0.10	0.30	1	3
From	47.30	To	47.40	0.10	0.40	1	4
From	47.40	To	47.50	0.10	0.50	1	5

TEST PENETRATION

Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	47.50	To	47.60	0.10	0.10	1	1
From	47.60	To	47.70	0.10	0.20	1	2
From	47.70	To	47.80	0.10	0.30	1	3
From	47.80	To	47.90	0.10	0.40	2	5
From	47.90	To	48.00	0.10	0.50	2	7
From	48.00	To	48.10	0.10	0.60	2	9
From	48.10	To	48.20	0.10	0.70	2	11
From	48.20	To	48.30	0.10	0.80	3	14
From	48.30	To	48.40	0.10	0.90	3	17
From	48.40	To	48.50	0.10	1.00	2	19

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION 1.50

TOTAL
RECOVERY 1.5 PERCENT
RECOVERY 100

TOTAL BLOWS (after seating) 19 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 49.50	TO: 51.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 49.50 To 49.60	0.10	0.10	1	1
From 49.60 To 49.70	0.10	0.20	1	2
From 49.70 To 49.80	0.10	0.30	1	3
From 49.80 To 49.90	0.10	0.40	1	4
From 49.90 To 50.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 50.00 To 50.10	0.10	0.10	2	2
From 50.10 To 50.20	0.10	0.20	2	4
From 50.20 To 50.30	0.10	0.30	2	6
From 50.30 To 50.40	0.10	0.40	2	8
From 50.40 To 50.50	0.10	0.50	2	10
From 50.50 To 50.60	0.10	0.60	2	12
From 50.60 To 50.70	0.10	0.70	3	15
From 50.70 To 50.80	0.10	0.80	2	17
From 50.80 To 50.90	0.10	0.90	3	20
From 50.90 To 51.00	0.10	1.00	3	23

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 23 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 52.00	TO: 53.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 52.00 To 52.10	0.10	0.10	1	1
From 52.10 To 52.20	0.10	0.20	1	2
From 52.20 To 52.30	0.10	0.30	1	3
From 52.30 To 52.40	0.10	0.40	1	4
From 52.40 To 52.50	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 52.50 To 52.60	0.10	0.10	1	1
From 52.60 To 52.70	0.10	0.20	2	3
From 52.70 To 52.80	0.10	0.30	2	5
From 52.80 To 52.90	0.10	0.40	2	7
From 52.90 To 53.00	0.10	0.50	2	9
From 53.00 To 53.10	0.10	0.60	2	11
From 53.10 To 53.20	0.10	0.70	3	14
From 53.20 To 53.30	0.10	0.80	3	17
From 53.30 To 53.40	0.10	0.90	2	19
From 53.40 To 53.50	0.10	1.00	3	22

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 22 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>54.50</u>	TO: <u>56.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>54.50</u> To <u>54.60</u>	0.10	0.10	1	1
From <u>54.60</u> To <u>54.70</u>	0.10	0.20	1	2
From <u>54.70</u> To <u>54.80</u>	0.10	0.30	1	3
From <u>54.80</u> To <u>54.90</u>	0.10	0.40	1	4
From <u>54.90</u> To <u>55.00</u>	0.10	0.50	2	6

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>55.00</u> To <u>55.10</u>	0.10	0.10	1	1
From <u>55.10</u> To <u>55.20</u>	0.10	0.20	2	3
From <u>55.20</u> To <u>55.30</u>	0.10	0.30	2	5
From <u>55.30</u> To <u>55.40</u>	0.10	0.40	2	7
From <u>55.40</u> To <u>55.50</u>	0.10	0.50	3	10
From <u>55.50</u> To <u>55.60</u>	0.10	0.60	2	12
From <u>55.60</u> To <u>55.70</u>	0.10	0.70	3	15
From <u>55.70</u> To <u>55.80</u>	0.10	0.80	2	17
From <u>55.80</u> To <u>55.90</u>	0.10	0.90	3	20
From <u>55.90</u> To <u>56.00</u>	0.10	1.00	4	24

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 24 EXTRAPOLATED VAL. =

Description and
classification of
material.

Case No.	Case Name	Case Type	Case Status
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5

Case No.	Case Name	Case Type	Case Status
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15

16	16	16	16
17	17	17	17
18	18	18	18

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 57.00	TO: 58.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 57.00 To 57.10	0.10	0.10	1	1
From 57.10 To 57.20	0.10	0.20	1	2
From 57.20 To 57.30	0.10	0.30	1	3
From 57.30 To 57.40	0.10	0.40	1	4
From 57.40 To 57.50	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 57.50 To 57.60	0.10	0.10	1	1
From 57.60 To 57.70	0.10	0.20	2	3
From 57.70 To 57.80	0.10	0.30	2	5
From 57.80 To 57.90	0.10	0.40	2	7
From 57.90 To 58.00	0.10	0.50	3	10
From 58.00 To 58.10	0.10	0.60	2	12
From 58.10 To 58.20	0.10	0.70	3	15
From 58.20 To 58.30	0.10	0.80	2	17
From 58.30 To 58.40	0.10	0.90	3	20
From 58.40 To 58.50	0.10	1.00	3	23

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	100
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TOTAL BLOWS (after seating) 23 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

Year	Month	Day	Time	Location	Remarks
1990	1	1	10:00	1000	1000
1990	1	2	10:00	1000	1000
1990	1	3	10:00	1000	1000
1990	1	4	10:00	1000	1000
1990	1	5	10:00	1000	1000
1990	1	6	10:00	1000	1000

Year	Month	Day	Time	Location	Remarks
1990	1	1	10:00	1000	1000
1990	1	2	10:00	1000	1000
1990	1	3	10:00	1000	1000
1990	1	4	10:00	1000	1000
1990	1	5	10:00	1000	1000
1990	1	6	10:00	1000	1000
1990	1	7	10:00	1000	1000
1990	1	8	10:00	1000	1000
1990	1	9	10:00	1000	1000
1990	1	10	10:00	1000	1000
1990	1	11	10:00	1000	1000
1990	1	12	10:00	1000	1000

Year	Month	Day	Time	Location	Remarks
1990	1	1	10:00	1000	1000
1990	1	2	10:00	1000	1000
1990	1	3	10:00	1000	1000
1990	1	4	10:00	1000	1000
1990	1	5	10:00	1000	1000
1990	1	6	10:00	1000	1000
1990	1	7	10:00	1000	1000
1990	1	8	10:00	1000	1000
1990	1	9	10:00	1000	1000
1990	1	10	10:00	1000	1000
1990	1	11	10:00	1000	1000
1990	1	12	10:00	1000	1000

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 59.50	TO: 61.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 59.50 To 60.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 60.00 To 60.10	0.10	0.10	1	1
From 60.10 To 60.20	0.10	0.20	1	2
From 60.20 To 60.30	0.10	0.30	2	4
From 60.30 To 60.40	0.10	0.40	1	5
From 60.40 To 60.50	0.10	0.50	1	6
From 60.50 To 60.60	0.10	0.60	2	8
From 60.60 To 60.70	0.10	0.70	1	9
From 60.70 To 60.80	0.10	0.80	2	11
From 60.80 To 60.90	0.10	0.90	2	13
From 60.90 To 61.00	0.10	1.00	3	16

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 16 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.5' (59.5-60.0')

Subject: [Blank]

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SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 62.00

TO: 63.50

SEATING PENETRATION

Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	62.00	To	62.10	0.10	0.10	1	1
From	62.10	To	62.20	0.10	0.20	1	2
From	62.20	To	62.30	0.10	0.30	1	3
From	62.30	To	62.40	0.10	0.40	1	4
From	62.40	To	62.50	0.10	0.50	2	6

TEST PENETRATION

Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	62.50	To	62.60	0.10	0.10	6	6
From	62.60	To	62.70	0.10	0.20	5	11
From	62.70	To	62.80	0.10	0.30	4	15
From	62.80	To	62.90	0.10	0.40	3	18
From	62.90	To	63.00	0.10	0.50	3	21
From	63.00	To	63.10	0.10	0.60	2	23
From	63.10	To	63.20	0.10	0.70	2	25
From	63.20	To	63.30	0.10	0.80	3	28
From	63.30	To	63.40	0.10	0.90	3	31
From	63.40	To	63.50	0.10	1.00	3	34

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

100

TOTAL BLOWS (after seating)

34

EXTRAPOLATED VAL. =

Description and
classification of
material.

Rock at 62.7'

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSIT
1-1-78	100.00	100.00		
1-2-78	100.00	100.00		
1-3-78	100.00	100.00		
1-4-78	100.00	100.00		
1-5-78	100.00	100.00		
1-6-78	100.00	100.00		
1-7-78	100.00	100.00		
1-8-78	100.00	100.00		
1-9-78	100.00	100.00		
1-10-78	100.00	100.00		
1-11-78	100.00	100.00		
1-12-78	100.00	100.00		
1-13-78	100.00	100.00		
1-14-78	100.00	100.00		
1-15-78	100.00	100.00		
1-16-78	100.00	100.00		
1-17-78	100.00	100.00		
1-18-78	100.00	100.00		
1-19-78	100.00	100.00		
1-20-78	100.00	100.00		
1-21-78	100.00	100.00		
1-22-78	100.00	100.00		
1-23-78	100.00	100.00		
1-24-78	100.00	100.00		
1-25-78	100.00	100.00		
1-26-78	100.00	100.00		
1-27-78	100.00	100.00		
1-28-78	100.00	100.00		
1-29-78	100.00	100.00		
1-30-78	100.00	100.00		
1-31-78	100.00	100.00		

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSIT
2-1-78	100.00	100.00		
2-2-78	100.00	100.00		
2-3-78	100.00	100.00		
2-4-78	100.00	100.00		
2-5-78	100.00	100.00		
2-6-78	100.00	100.00		
2-7-78	100.00	100.00		
2-8-78	100.00	100.00		
2-9-78	100.00	100.00		
2-10-78	100.00	100.00		
2-11-78	100.00	100.00		
2-12-78	100.00	100.00		
2-13-78	100.00	100.00		
2-14-78	100.00	100.00		
2-15-78	100.00	100.00		
2-16-78	100.00	100.00		
2-17-78	100.00	100.00		
2-18-78	100.00	100.00		
2-19-78	100.00	100.00		
2-20-78	100.00	100.00		
2-21-78	100.00	100.00		
2-22-78	100.00	100.00		
2-23-78	100.00	100.00		
2-24-78	100.00	100.00		
2-25-78	100.00	100.00		
2-26-78	100.00	100.00		
2-27-78	100.00	100.00		
2-28-78	100.00	100.00		
2-29-78	100.00	100.00		
2-30-78	100.00	100.00		
2-31-78	100.00	100.00		

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSIT
3-1-78	100.00	100.00		
3-2-78	100.00	100.00		
3-3-78	100.00	100.00		
3-4-78	100.00	100.00		
3-5-78	100.00	100.00		
3-6-78	100.00	100.00		
3-7-78	100.00	100.00		
3-8-78	100.00	100.00		
3-9-78	100.00	100.00		
3-10-78	100.00	100.00		
3-11-78	100.00	100.00		
3-12-78	100.00	100.00		
3-13-78	100.00	100.00		
3-14-78	100.00	100.00		
3-15-78	100.00	100.00		
3-16-78	100.00	100.00		
3-17-78	100.00	100.00		
3-18-78	100.00	100.00		
3-19-78	100.00	100.00		
3-20-78	100.00	100.00		
3-21-78	100.00	100.00		
3-22-78	100.00	100.00		
3-23-78	100.00	100.00		
3-24-78	100.00	100.00		
3-25-78	100.00	100.00		
3-26-78	100.00	100.00		
3-27-78	100.00	100.00		
3-28-78	100.00	100.00		
3-29-78	100.00	100.00		
3-30-78	100.00	100.00		
3-31-78	100.00	100.00		

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 64.50	TO: 66.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 64.50 To 64.70	0.20	0.20	0	0
From 64.70 To 64.80	0.10	0.30	1	1
From 64.80 To 64.90	0.10	0.40	1	2
From 64.90 To 65.00	0.10	0.50	1	3
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 65.00 To 65.10	0.10	0.10	1	1
From 65.10 To 65.20	0.10	0.20	2	3
From 65.20 To 65.30	0.10	0.30	2	5
From 65.30 To 65.40	0.10	0.40	2	7
From 65.40 To 65.50	0.10	0.50	3	10
From 65.50 To 65.60	0.10	0.60	1	11
From 65.60 To 65.70	0.10	0.70	3	14
From 65.70 To 65.80	0.10	0.80	2	16
From 65.80 To 65.90	0.10	0.90	4	20
From 65.90 To 66.00	0.10	1.00	3	23

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.9 PERCENT RECOVERY 60

TOTAL BLOWS (after seating) 23 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.2' (64.5-64.7')

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/05/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 67.00	TO: 68.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 67.00 To 67.10	0.10	0.10	0	0
From 67.10 To 67.20	0.10	0.20	1	1
From 67.20 To 67.30	0.10	0.30	1	2
From 67.30 To 67.40	0.10	0.40	1	3
From 67.40 To 67.50	0.10	0.50	1	4

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 67.50 To 67.60	0.10	0.10	2	2
From 67.60 To 67.70	0.10	0.20	1	3
From 67.70 To 67.80	0.10	0.30	2	5
From 67.80 To 67.90	0.10	0.40	3	8
From 67.90 To 68.00	0.10	0.50	2	10
From 68.00 To 68.10	0.10	0.60	2	12
From 68.10 To 68.20	0.10	0.70	2	14
From 68.20 To 68.30	0.10	0.80	2	16
From 68.30 To 68.40	0.10	0.90	3	19
From 68.40 To 68.50	0.10	1.00	3	22

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	80
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TOTAL BLOWS (after seating) 22 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.1' (67.0-67.1')

SPT DATA SHEET

HOLE NO. PR97-202

DATE

05/06/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 69.50	TO: 71.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 69.50 To 69.70	0.20	0.20	1	1
From 69.70 To 69.80	0.10	0.30	1	2
From 69.80 To 69.90	0.10	0.40	1	3
From 69.90 To 70.00	0.10	0.50	2	5
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 70.00 To 70.10	0.10	0.10	2	2
From 70.10 To 70.20	0.10	0.20	1	3
From 70.20 To 70.30	0.10	0.30	2	5
From 70.30 To 70.40	0.10	0.40	2	7
From 70.40 To 70.50	0.10	0.50	2	9
From 70.50 To 70.60	0.10	0.60	1	10
From 70.60 To 70.70	0.10	0.70	3	13
From 70.70 To 70.80	0.10	0.80	2	15
From 70.80 To 70.90	0.10	0.90	3	18
From 70.90 To 71.00	0.10	1.00	3	21

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 21 EXTRAPOLATED VAL. =

Description and classification of material.

PR97-203



SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/06/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 4.50	TO: 6.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 4.50 To 4.70	0.20	0.20	1	1
From 4.70 To 4.80	0.10	0.30	1	2
From 4.80 To 4.90	0.10	0.40	1	3
From 4.90 To 5.00	0.10	0.50	2	5
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 5.00 To 5.10	0.10	0.10	1	1
From 5.10 To 5.20	0.10	0.20	1	2
From 5.20 To 5.30	0.10	0.30	1	3
From 5.30 To 5.40	0.10	0.40	1	4
From 5.40 To 5.50	0.10	0.50	1	5
From 5.50 To 5.60	0.10	0.60	1	6
From 5.60 To 5.70	0.10	0.70	1	7
From 5.70 To 5.80	0.10	0.80	1	8
From 5.80 To 5.90	0.10	0.90	1	9
From 5.90 To 6.00	0.10	1.00	2	11

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 67

TOTAL BLOWS (after seating) 11 EXTRAPOLATED VAL. =

Description and classification of material.

UNIT 1: THE HISTORY OF THE UNITED STATES

NAME: _____ DATE: _____

LESSON 1: THE FOUNDING FATHERS

1. The Founding Fathers were the men who created the United States. They were men of great wisdom and courage. They fought for the rights of all people. They created a new nation. They are the men who made the United States what it is today.

UNIT 2: THE AMERICAN WEST

NAME	DATE	LOCATION	ACTIVITY
1.			
2.			
3.			
4.			
5.			

UNIT 3: THE AMERICAN WEST

NAME	DATE	LOCATION	ACTIVITY
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

10. The American West was a place of great adventure and discovery. It was a place where men of great courage and strength went to seek their fortune. They found gold, silver, and other precious metals. They built cities and towns. They made the American West what it is today.

UNIT 4: THE AMERICAN WEST

NAME	DATE	LOCATION	ACTIVITY
1.			
2.			
3.			
4.			
5.			

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/06/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 9.50	TO: 11.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 9.50 To 9.80	0.30	0.30	0	0
From 9.80 To 9.90	0.10	0.40	1	1
From 9.90 To 10.00	0.10	0.50	1	2
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 10.00 To 10.10	0.10	0.10	1	1
From 10.10 To 10.20	0.10	0.20	1	2
From 10.20 To 10.30	0.10	0.30	1	3
From 10.30 To 10.40	0.10	0.40	1	4
From 10.40 To 10.50	0.10	0.50	2	6
From 10.50 To 10.60	0.10	0.60	1	7
From 10.60 To 10.70	0.10	0.70	2	9
From 10.70 To 10.80	0.10	0.80	1	10
From 10.80 To 10.90	0.10	0.90	2	12
From 10.90 To 11.00	0.10	1.00	2	14

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	100
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TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.3' (9.5-9.8')

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/06/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 14.50	TO: 16.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 14.50 To 14.70	0.20	0.20	1	1
From 14.70 To 14.90	0.20	0.40	1	2
From 14.90 To 15.00	0.10	0.50	1	3
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 15.00 To 15.10	0.10	0.10	1	1
From 15.10 To 15.20	0.10	0.20	1	2
From 15.20 To 15.30	0.10	0.30	1	3
From 15.30 To 15.40	0.10	0.40	1	4
From 15.40 To 15.50	0.10	0.50	2	6
From 15.50 To 15.60	0.10	0.60	1	7
From 15.60 To 15.70	0.10	0.70	1	8
From 15.70 To 15.80	0.10	0.80	2	10
From 15.80 To 15.90	0.10	0.90	2	12
From 15.90 To 16.00	0.10	1.00	2	14

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.2 PERCENT RECOVERY 80

TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 19.50	TO: 21.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 19.50 To 19.70	0.20	0.20	1	1
From 19.70 To 19.80	0.10	0.30	1	2
From 19.80 To 19.90	0.10	0.40	2	4
From 19.90 To 20.00	0.10	0.50	2	6
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 20.00 To 20.10	0.10	0.10	1	1
From 20.10 To 20.20	0.10	0.20	1	2
From 20.20 To 20.30	0.10	0.30	1	3
From 20.30 To 20.40	0.10	0.40	1	4
From 20.40 To 20.50	0.10	0.50	1	5
From 20.50 To 20.60	0.10	0.60	2	7
From 20.60 To 20.70	0.10	0.70	1	8
From 20.70 To 20.80	0.10	0.80	2	10
From 20.80 To 20.90	0.10	0.90	2	12
From 20.90 To 21.00	0.10	1.00	3	15

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.7 PERCENT RECOVERY 47

TOTAL BLOWS (after seating) 15 EXTRAPOLATED VAL. =

Description and classification of material.

UNITED STATES

DEPARTMENT OF THE ARMY
 OFFICE OF THE CHIEF OF STAFF
 WASHINGTON, D. C. 20315

1. *[Faint, illegible text]*
 2. *[Faint, illegible text]*
 3. *[Faint, illegible text]*
 4. *[Faint, illegible text]*
 5. *[Faint, illegible text]*

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1. *[Faint, illegible text]*
 2. *[Faint, illegible text]*
 3. *[Faint, illegible text]*
 4. *[Faint, illegible text]*
 5. *[Faint, illegible text]*

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SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 24.50	TO: 26.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 24.50 To 24.80	0.30	0.30	1	1
From 24.80 To 24.90	0.10	0.40	1	2
From 24.90 To 25.00	0.10	0.50	1	3
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 25.00 To 25.10	0.10	0.10	1	1
From 25.10 To 25.20	0.10	0.20	1	2
From 25.20 To 25.30	0.10	0.30	1	3
From 25.30 To 25.40	0.10	0.40	1	4
From 25.40 To 25.50	0.10	0.50	2	6
From 25.50 To 25.60	0.10	0.60	1	7
From 25.60 To 25.70	0.10	0.70	1	8
From 25.70 To 25.80	0.10	0.80	2	10
From 25.80 To 25.90	0.10	0.90	2	12
From 25.90 To 26.00	0.10	1.00	2	14

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 67

TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. =

Description and
classification of
material.

UNITED STATES

DEPARTMENT OF THE ARMY

FORM 1

10-60 (Rev. 1-59)

1. NAME (Last, first, middle initial)
 2. GRADE OR RATE
 3. ORGANIZATION
 4. ADDRESS
 5. CITY, STATE, ZIP CODE
 6. PHONE NUMBER (Area and number)
 7. SOCIAL SECURITY NUMBER
 8. DATE OF BIRTH (Month, day, year)
 9. DATE OF ENTRY (Month, day, year)
 10. DATE OF EXPIRATION (Month, day, year)

11. DATE OF LAST EXAMINATION (Month, day, year)
 12. DATE OF NEXT EXAMINATION (Month, day, year)
 13. DATE OF LAST VACCINATION (Month, day, year)
 14. DATE OF NEXT VACCINATION (Month, day, year)
 15. DATE OF LAST PHYSICAL (Month, day, year)
 16. DATE OF NEXT PHYSICAL (Month, day, year)
 17. DATE OF LAST DENTAL (Month, day, year)
 18. DATE OF NEXT DENTAL (Month, day, year)
 19. DATE OF LAST EYE (Month, day, year)
 20. DATE OF NEXT EYE (Month, day, year)

21. DATE OF LAST HEARING (Month, day, year)
 22. DATE OF NEXT HEARING (Month, day, year)
 23. DATE OF LAST SKIN (Month, day, year)
 24. DATE OF NEXT SKIN (Month, day, year)
 25. DATE OF LAST X-RAY (Month, day, year)
 26. DATE OF NEXT X-RAY (Month, day, year)
 27. DATE OF LAST TUBERCULIN (Month, day, year)
 28. DATE OF NEXT TUBERCULIN (Month, day, year)
 29. DATE OF LAST SYPHILIS (Month, day, year)
 30. DATE OF NEXT SYPHILIS (Month, day, year)

31. DATE OF LAST HIV (Month, day, year)
 32. DATE OF NEXT HIV (Month, day, year)
 33. DATE OF LAST HEPATITIS (Month, day, year)
 34. DATE OF NEXT HEPATITIS (Month, day, year)

35. DATE OF LAST MALARIA (Month, day, year)
 36. DATE OF NEXT MALARIA (Month, day, year)
 37. DATE OF LAST MEASLES (Month, day, year)
 38. DATE OF NEXT MEASLES (Month, day, year)

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>29.50</u>	TO: <u>31.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>29.50</u> To <u>29.80</u>	<u>0.30</u>	<u>0.30</u>	<u>1</u>	<u>1</u>
From <u>29.80</u> To <u>29.90</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>2</u>
From <u>29.90</u> To <u>30.00</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>3</u>
From <u> </u> To <u> </u>				
From <u> </u> To <u> </u>				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>30.00</u> To <u>30.10</u>	<u>0.10</u>	<u>0.10</u>	<u>1</u>	<u>1</u>
From <u>30.10</u> To <u>30.20</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>2</u>
From <u>30.20</u> To <u>30.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>3</u>
From <u>30.30</u> To <u>30.40</u>	<u>0.10</u>	<u>0.40</u>	<u>2</u>	<u>5</u>
From <u>30.40</u> To <u>30.50</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>6</u>
From <u>30.50</u> To <u>30.60</u>	<u>0.10</u>	<u>0.60</u>	<u>1</u>	<u>7</u>
From <u>30.60</u> To <u>30.70</u>	<u>0.10</u>	<u>0.70</u>	<u>1</u>	<u>8</u>
From <u>30.70</u> To <u>30.80</u>	<u>0.10</u>	<u>0.80</u>	<u>2</u>	<u>10</u>
From <u>30.80</u> To <u>30.90</u>	<u>0.10</u>	<u>0.90</u>	<u>1</u>	<u>11</u>
From <u>30.90</u> To <u>31.00</u>	<u>0.10</u>	<u>1.00</u>	<u>2</u>	<u>13</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.0 PERCENT RECOVERY 67

TOTAL BLOWS (after seating) 13 EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH FROM: 34.50 TO: 36.00

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 34.50 To 34.60	0.10	0.10	1	1
From 34.60 To 34.70	0.10	0.20	1	2
From 34.70 To 34.80	0.10	0.30	1	3
From 34.80 To 34.90	0.10	0.40	1	4
From 34.90 To 35.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 35.00 To 35.10	0.10	0.10	1	1
From 35.10 To 35.20	0.10	0.20	2	3
From 35.20 To 35.30	0.10	0.30	2	5
From 35.30 To 35.40	0.10	0.40	1	6
From 35.40 To 35.50	0.10	0.50	2	8
From 35.50 To 35.60	0.10	0.60	2	10
From 35.60 To 35.70	0.10	0.70	2	12
From 35.70 To 35.80	0.10	0.80	2	14
From 35.80 To 35.90	0.10	0.90	2	16
From 35.90 To 36.00	0.10	1.00	2	18

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY

53

TOTAL BLOWS (after seating)

18

EXTRAPOLATED VAL. =

Description and classification of material.

EXERCISE 1

Write the following numbers in words.

1. 123456789
2. 987654321
3. 567890123
4. 345678901
5. 234567890
6. 123456789
7. 987654321
8. 567890123
9. 345678901
10. 234567890

Number	Words
1	one
2	two
3	three
4	four
5	five
6	six
7	seven
8	eight
9	nine
10	ten

Number	Words
11	eleven
12	twelve
13	thirteen
14	fourteen
15	fifteen
16	sixteen
17	seventeen
18	eighteen
19	nineteen
20	twenty

Number	Words
21	twenty-one
22	twenty-two
23	twenty-three
24	twenty-four
25	twenty-five
26	twenty-six
27	twenty-seven
28	twenty-eight
29	twenty-nine
30	thirty

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 39.50	TO: 41.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 39.50 To 39.70	0.20	0.20	1	1
From 39.70 To 39.80	0.10	0.30	1	2
From 39.80 To 39.90	0.10	0.40	1	3
From 39.90 To 40.00	0.10	0.50	1	4
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 40.00 To 40.10	0.10	0.10	2	2
From 40.10 To 40.20	0.10	0.20	1	3
From 40.20 To 40.30	0.10	0.30	2	5
From 40.30 To 40.40	0.10	0.40	2	7
From 40.40 To 40.50	0.10	0.50	1	8
From 40.50 To 40.60	0.10	0.60	2	10
From 40.60 To 40.70	0.10	0.70	1	11
From 40.70 To 40.80	0.10	0.80	3	14
From 40.80 To 40.90	0.10	0.90	3	17
From 40.90 To 41.00	0.10	1.00	3	20

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT 1.5 RECOVERY 100

TOTAL BLOWS (after seating) 20 EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 44.50	TO: 46.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 44.50 To 44.60	0.10	0.10	1	1
From 44.60 To 44.70	0.10	0.20	1	2
From 44.70 To 44.80	0.10	0.30	1	3
From 44.80 To 44.90	0.10	0.40	1	4
From 44.90 To 45.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 45.00 To 45.10	0.10	0.10	2	2
From 45.10 To 45.20	0.10	0.20	2	4
From 45.20 To 45.30	0.10	0.30	1	5
From 45.30 To 45.40	0.10	0.40	1	6
From 45.40 To 45.50	0.10	0.50	1	7
From 45.50 To 45.60	0.10	0.60	1	8
From 45.60 To 45.70	0.10	0.70	2	10
From 45.70 To 45.80	0.10	0.80	2	12
From 45.80 To 45.90	0.10	0.90	2	14
From 45.90 To 46.00	0.10	1.00	1	15

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.3 PERCENT RECOVERY 87

TOTAL BLOWS (after seating) 15 EXTRAPOLATED VAL. =

Description and classification of material.

1997-1998		1998-1999	
1997-1998	1998-1999	1997-1998	1998-1999
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32

1999-2000		2000-2001	
1999-2000	2000-2001	1999-2000	2000-2001
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

101	102	103	104
105	106	107	108
109	110	111	112
113	114	115	116
117	118	119	120
121	122	123	124
125	126	127	128
129	130	131	132
133	134	135	136
137	138	139	140
141	142	143	144
145	146	147	148
149	150	151	152
153	154	155	156
157	158	159	160
161	162	163	164
165	166	167	168
169	170	171	172
173	174	175	176
177	178	179	180
181	182	183	184
185	186	187	188
189	190	191	192
193	194	195	196
197	198	199	200

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 47.00	TO: 48.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 47.00 To 47.20	0.20	0.20	1	1
From 47.20 To 47.30	0.10	0.30	1	2
From 47.30 To 47.50	0.20	0.50	1	3
From To				
From To				

TEST PENETRATION

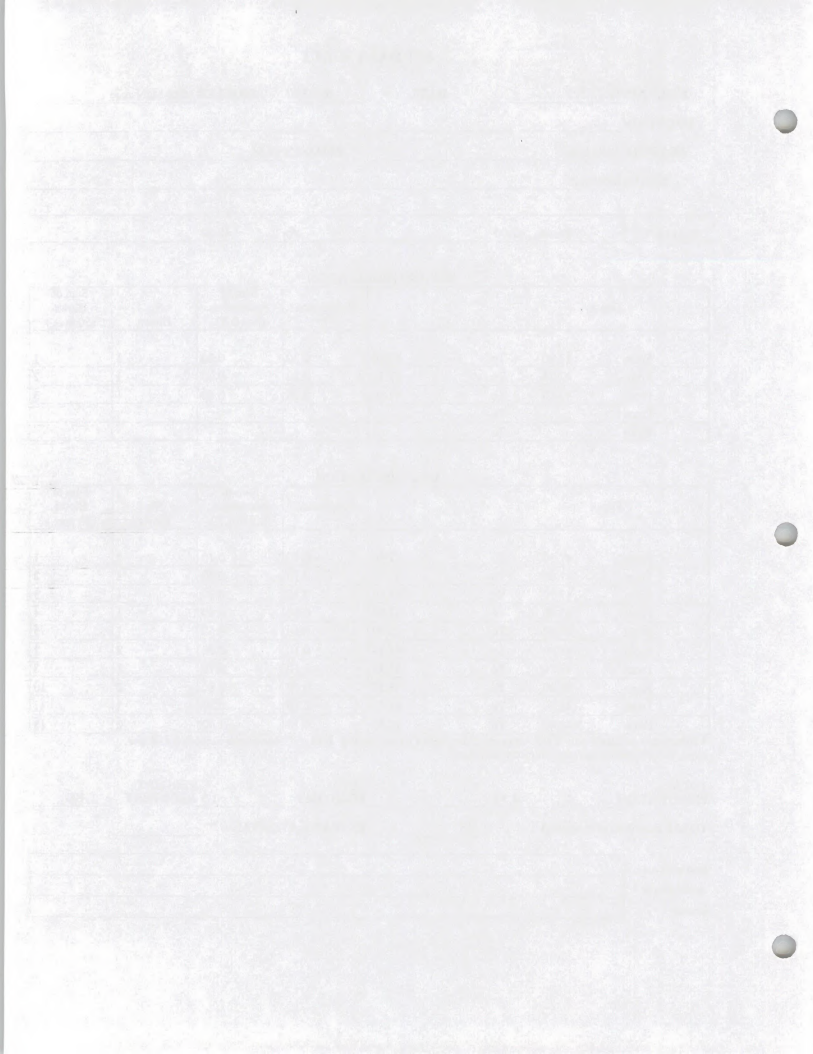
Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 47.50 To 47.60	0.10	0.10	1	1
From 47.60 To 47.70	0.10	0.20	1	2
From 47.70 To 47.80	0.10	0.30	1	3
From 47.80 To 47.90	0.10	0.40	1	4
From 47.90 To 48.00	0.10	0.50	1	5
From 48.00 To 48.10	0.10	0.60	2	7
From 48.10 To 48.20	0.10	0.70	1	8
From 48.20 To 48.30	0.10	0.80	2	10
From 48.30 To 48.40	0.10	0.90	1	11
From 48.40 To 48.50	0.10	1.00	2	13

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 13 EXTRAPOLATED VAL. =

Description and classification of material.



SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 49.50	TO: 51.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 49.50 To 49.70	0.20	0.20	1	1
From 49.70 To 49.80	0.10	0.30	1	2
From 49.80 To 50.00	0.20	0.50	1	3
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 50.00 To 50.10	0.10	0.10	1	1
From 50.10 To 50.20	0.10	0.20	2	3
From 50.20 To 50.30	0.10	0.30	1	4
From 50.30 To 50.40	0.10	0.40	2	6
From 50.40 To 50.50	0.10	0.50	2	8
From 50.50 To 50.60	0.10	0.60	1	9
From 50.60 To 50.70	0.10	0.70	2	11
From 50.70 To 50.80	0.10	0.80	2	13
From 50.80 To 50.90	0.10	0.90	1	14
From 50.90 To 51.00	0.10	1.00	3	17

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.4 PERCENT RECOVERY 93

TOTAL BLOWS (after seating) 17 EXTRAPOLATED VAL. = _____

Description and
classification of
material.



SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/07/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 52.00

TO: 53.50

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 52.00 To 52.40	0.40	0.40	1	1
From 52.40 To 52.50	0.10	0.50	1	2
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 52.50 To 52.60	0.10	0.10	1	1
From 52.60 To 52.70	0.10	0.20	1	2
From 52.70 To 52.80	0.10	0.30	1	3
From 52.80 To 52.90	0.10	0.40	1	4
From 52.90 To 53.00	0.10	0.50	1	5
From 53.00 To 53.10	0.10	0.60	1	6
From 53.10 To 53.20	0.10	0.70	1	7
From 53.20 To 53.30	0.10	0.80	1	8
From 53.30 To 53.40	0.10	0.90	2	10
From 53.40 To 53.50	0.10	1.00	3	13

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY 0.8

53

TOTAL BLOWS (after seating)

13

EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.3' (52.0-52.3')

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>54.50</u>	TO: <u>56.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>54.50</u> To <u>54.70</u>	<u>0.20</u>	<u>0.20</u>	<u>1</u>	<u>1</u>
From <u>54.70</u> To <u>54.80</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>2</u>
From <u>54.80</u> To <u>54.90</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>3</u>
From <u>54.90</u> To <u>55.00</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>4</u>
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>55.00</u> To <u>55.10</u>	<u>0.10</u>	<u>0.10</u>	<u>1</u>	<u>1</u>
From <u>55.10</u> To <u>55.20</u>	<u>0.10</u>	<u>0.20</u>	<u>2</u>	<u>3</u>
From <u>55.20</u> To <u>55.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>4</u>
From <u>55.30</u> To <u>55.40</u>	<u>0.10</u>	<u>0.40</u>	<u>2</u>	<u>6</u>
From <u>55.40</u> To <u>55.50</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>8</u>
From <u>55.50</u> To <u>55.60</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>10</u>
From <u>55.60</u> To <u>55.70</u>	<u>0.10</u>	<u>0.70</u>	<u>2</u>	<u>12</u>
From <u>55.70</u> To <u>55.80</u>	<u>0.10</u>	<u>0.80</u>	<u>2</u>	<u>14</u>
From <u>55.80</u> To <u>55.90</u>	<u>0.10</u>	<u>0.90</u>	<u>3</u>	<u>17</u>
From <u>55.90</u> To <u>56.00</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>20</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 20 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 57.00	TO: 58.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 57.00 To 57.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 57.50 To 57.60	0.10	0.10	0	0
From 57.60 To 57.70	0.10	0.20	1	1
From 57.70 To 57.80	0.10	0.30	1	2
From 57.80 To 57.90	0.10	0.40	1	3
From 57.90 To 58.00	0.10	0.50	1	4
From 58.00 To 58.10	0.10	0.60	1	5
From 58.10 To 58.20	0.10	0.70	2	7
From 58.20 To 58.30	0.10	0.80	2	9
From 58.30 To 58.40	0.10	0.90	2	11
From 58.40 To 58.50	0.10	1.00	2	13

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 93

TOTAL BLOWS (after seating) 13 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.6' (57.0-57.6')

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 59.50	TO: 61.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 59.50 To 60.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 60.00 To 60.10	0.10	0.10	0	0
From 60.10 To 60.20	0.10	0.20	1	1
From 60.20 To 60.30	0.10	0.30	1	2
From 60.30 To 60.40	0.10	0.40	1	3
From 60.40 To 60.50	0.10	0.50	1	4
From 60.50 To 60.60	0.10	0.60	2	6
From 60.60 To 60.70	0.10	0.70	2	8
From 60.70 To 60.80	0.10	0.80	3	11
From 60.80 To 60.90	0.10	0.90	2	13
From 60.90 To 61.00	0.10	1.00	2	15

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 15 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.6' (59.5-60.1')

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 62.00	TO: 63.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 62.00 To 62.50	0.50	0.50	0	0
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 62.50 To 62.60	0.10	0.10	0	0
From 62.60 To 62.70	0.10	0.20	1	1
From 62.70 To 62.80	0.10	0.30	2	3
From 62.80 To 62.90	0.10	0.40	1	4
From 62.90 To 63.00	0.10	0.50	1	5
From 63.00 To 63.10	0.10	0.60	2	7
From 63.10 To 63.20	0.10	0.70	2	9
From 63.20 To 63.30	0.10	0.80	2	11
From 63.30 To 63.40	0.10	0.90	2	13
From 63.40 To 63.50	0.10	1.00	3	16

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 16 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.6' (62.0-62.6')

1. The first part of the document is a list of the names of the people who were present at the meeting.

2. The second part of the document is a list of the topics that were discussed during the meeting.

3. The third part of the document is a list of the actions that were taken during the meeting.

4. The fourth part of the document is a list of the decisions that were made during the meeting.

Name	Address	Phone	Email
John Doe	123 Main St	555-1234	john.doe@example.com
Jane Smith	456 Elm St	555-5678	jane.smith@example.com
Bob Johnson	789 Oak St	555-9012	bob.johnson@example.com
Alice Brown	101 Pine St	555-3456	alice.brown@example.com

Topic	Discussion	Action	Decision
Project A	Status report	Review progress	Approved
Project B	Budget review	Check expenses	Rejected
Project C	Timeline update	Adjust schedule	Approved
Project D	Resource allocation	Assign tasks	Approved

Decision	Action	Discussion	Topic
Approved	Implement	Review	Project A
Rejected	Cancel	Review	Project B
Approved	Implement	Review	Project C
Approved	Implement	Review	Project D

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 64.50	TO: 66.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 64.50 To 65.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 65.00 To 65.60	0.60	0.60	0	0
From 65.60 To 65.70	0.10	0.70	2	2
From 65.70 To 65.80	0.10	0.80	2	4
From 65.80 To 65.90	0.10	0.90	2	6
From 65.90 To 66.00	0.10	1.00	2	8
From To				
From To				
From To				
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From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 8 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.1' (64.5-65.6')

1. The first section of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity of the financial data and for facilitating the audit process. The text further states that all entries must be supported by appropriate documentation and must be reviewed regularly for accuracy.

2. The second section outlines the specific procedures for recording transactions. It details the steps involved in the accounting cycle, from identifying the transaction to posting it to the appropriate ledger accounts. The section also discusses the importance of double-checking calculations and ensuring that the debits equal the credits in every entry.

3. The third section addresses the issue of reconciling the accounts. It explains how to compare the company's records with the bank statements and how to identify and resolve any discrepancies. The text stresses that reconciliation should be performed on a regular basis to prevent errors from accumulating and to ensure that the financial statements are accurate.

Date	Description	Debit	Credit
1/1/2024	Opening Balance		1000.00
1/5/2024	Revenue from Sales		500.00
1/10/2024	Payment to Suppliers	200.00	
1/15/2024	Interest Income		50.00
1/20/2024	Salary Expense	300.00	
1/25/2024	Revenue from Services		750.00
1/30/2024	Utilities Expense	100.00	
2/1/2024	Closing Balance		1000.00

Date	Description	Debit	Credit
2/5/2024	Revenue from Sales		600.00
2/10/2024	Payment to Suppliers	250.00	
2/15/2024	Interest Income		60.00
2/20/2024	Salary Expense	350.00	
2/25/2024	Revenue from Services		800.00
2/28/2024	Utilities Expense	120.00	
3/1/2024	Closing Balance		1000.00

Date	Description	Debit	Credit
3/5/2024	Revenue from Sales		700.00
3/10/2024	Payment to Suppliers	300.00	
3/15/2024	Interest Income		70.00
3/20/2024	Salary Expense	400.00	
3/25/2024	Revenue from Services		900.00
3/30/2024	Utilities Expense	140.00	
4/1/2024	Closing Balance		1000.00

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 67.00

TO:

68.50

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 67.00 To 67.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 67.50 To 67.60	0.10	0.10	1	1
From 67.60 To 67.70	0.10	0.20	1	2
From 67.70 To 67.80	0.10	0.30	1	3
From 67.80 To 67.90	0.10	0.40	1	4
From 67.90 To 68.00	0.10	0.50	1	5
From 68.00 To 68.10	0.10	0.60	1	6
From 68.10 To 68.20	0.10	0.70	2	8
From 68.20 To 68.30	0.10	0.80	1	9
From 68.30 To 68.40	0.10	0.90	1	10
From 68.40 To 68.50	0.10	1.00	1	11

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY

100

TOTAL BLOWS (after seating)

11

EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.5' (67.0-67.5')

NAME	DATE
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SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 69.50

TO: 71.00

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 69.50 To 70.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 70.00 To 70.50	0.50	0.50	0	0
From 70.50 To 70.60	0.10	0.60	1	1
From 70.60 To 70.70	0.10	0.70	1	2
From 70.70 To 70.80	0.10	0.80	1	3
From 70.80 To 70.90	0.10	0.90	1	4
From 70.90 To 71.00	0.10	1.00	1	5
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY

100

TOTAL BLOWS (after seating)

5

EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.0' (69.5-70.5')

1. The first part of the document is a list of the names of the persons who have been named in the document.

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SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>72.00</u>	TO: <u>73.50</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>72.00</u> To <u>72.40</u>	<u>0.40</u>	<u>0.40</u>	<u>0</u>	<u>0</u>
From <u>72.40</u> To <u>72.50</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>2</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>72.50</u> To <u>72.60</u>	<u>0.10</u>	<u>0.10</u>	<u>2</u>	<u>2</u>
From <u>72.60</u> To <u>72.70</u>	<u>0.10</u>	<u>0.20</u>	<u>4</u>	<u>6</u>
From <u>72.70</u> To <u>72.80</u>	<u>0.10</u>	<u>0.30</u>	<u>3</u>	<u>9</u>
From <u>72.80</u> To <u>72.90</u>	<u>0.10</u>	<u>0.40</u>	<u>2</u>	<u>11</u>
From <u>72.90</u> To <u>73.00</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>13</u>
From <u>73.00</u> To <u>73.10</u>	<u>0.10</u>	<u>0.60</u>	<u>3</u>	<u>16</u>
From <u>73.10</u> To <u>73.20</u>	<u>0.10</u>	<u>0.70</u>	<u>3</u>	<u>19</u>
From <u>73.20</u> To <u>73.30</u>	<u>0.10</u>	<u>0.80</u>	<u>3</u>	<u>22</u>
From <u>73.30</u> To <u>73.40</u>	<u>0.10</u>	<u>0.90</u>	<u>3</u>	<u>25</u>
From <u>73.40</u> To <u>73.50</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>28</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.6 PERCENT RECOVERY 40

TOTAL BLOWS (after seating) 28 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

Rock in shoe of sampler

DATE	DESCRIPTION	AMOUNT	CHECK NO.
10/1/77	10/1/77	10/1/77	10/1/77
10/2/77	10/2/77	10/2/77	10/2/77
10/3/77	10/3/77	10/3/77	10/3/77
10/4/77	10/4/77	10/4/77	10/4/77
10/5/77	10/5/77	10/5/77	10/5/77
10/6/77	10/6/77	10/6/77	10/6/77
10/7/77	10/7/77	10/7/77	10/7/77
10/8/77	10/8/77	10/8/77	10/8/77
10/9/77	10/9/77	10/9/77	10/9/77
10/10/77	10/10/77	10/10/77	10/10/77
10/11/77	10/11/77	10/11/77	10/11/77
10/12/77	10/12/77	10/12/77	10/12/77
10/13/77	10/13/77	10/13/77	10/13/77
10/14/77	10/14/77	10/14/77	10/14/77
10/15/77	10/15/77	10/15/77	10/15/77
10/16/77	10/16/77	10/16/77	10/16/77
10/17/77	10/17/77	10/17/77	10/17/77
10/18/77	10/18/77	10/18/77	10/18/77
10/19/77	10/19/77	10/19/77	10/19/77
10/20/77	10/20/77	10/20/77	10/20/77
10/21/77	10/21/77	10/21/77	10/21/77
10/22/77	10/22/77	10/22/77	10/22/77
10/23/77	10/23/77	10/23/77	10/23/77
10/24/77	10/24/77	10/24/77	10/24/77
10/25/77	10/25/77	10/25/77	10/25/77
10/26/77	10/26/77	10/26/77	10/26/77
10/27/77	10/27/77	10/27/77	10/27/77
10/28/77	10/28/77	10/28/77	10/28/77
10/29/77	10/29/77	10/29/77	10/29/77
10/30/77	10/30/77	10/30/77	10/30/77
10/31/77	10/31/77	10/31/77	10/31/77

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>74.50</u>	TO: <u>76.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>74.50</u> To <u>75.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>75.00</u> To <u>75.60</u>	<u>0.60</u>	<u>0.60</u>	<u>1</u>	<u>1</u>
From <u>75.60</u> To <u>75.70</u>	<u>0.10</u>	<u>0.70</u>	<u>2</u>	<u>3</u>
From <u>75.70</u> To <u>75.80</u>	<u>0.10</u>	<u>0.80</u>	<u>1</u>	<u>4</u>
From <u>75.80</u> To <u>75.90</u>	<u>0.10</u>	<u>0.90</u>	<u>1</u>	<u>5</u>
From <u>75.90</u> To <u>76.00</u>	<u>0.10</u>	<u>1.00</u>	<u>1</u>	<u>6</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.9 PERCENT RECOVERY 60

TOTAL BLOWS (after seating) 6 EXTRAPOLATED VAL. = _____

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 77.00	TO: 78.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 77.00 To 77.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 77.50 To 77.60	0.10	0.10	0	0
From 77.60 To 77.70	0.10	0.20	1	1
From 77.70 To 77.80	0.10	0.30	1	2
From 77.80 To 77.90	0.10	0.40	1	3
From 77.90 To 78.00	0.10	0.50	2	5
From 78.00 To 78.10	0.10	0.60	1	6
From 78.10 To 78.20	0.10	0.70	2	8
From 78.20 To 78.30	0.10	0.80	2	10
From 78.30 To 78.40	0.10	0.90	2	12
From 78.40 To 78.50	0.10	1.00	2	14

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 0.6' (77.0-77.6')

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSIT
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SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 79.50	TO: 81.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 79.50 To 79.60	0.10	0.10	0	0
From 79.60 To 80.00	0.40	0.50	1	1
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 80.00 To 80.10	0.10	0.10	1	1
From 80.10 To 80.20	0.10	0.20	1	2
From 80.20 To 80.30	0.10	0.30	1	3
From 80.30 To 80.40	0.10	0.40	2	5
From 80.40 To 80.50	0.10	0.50	1	6
From 80.50 To 80.60	0.10	0.60	2	8
From 80.60 To 80.70	0.10	0.70	2	10
From 80.70 To 80.80	0.10	0.80	2	12
From 80.80 To 80.90	0.10	0.90	2	14
From 80.90 To 81.00	0.10	1.00	2	16

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 16 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 0.1' (79.5-79.6')

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/19			
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3/1/19			
4/1/19			
5/1/19			
6/1/19			
7/1/19			
8/1/19			
9/1/19			
10/1/19			
11/1/19			
12/1/19			

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/19			
2/1/19			
3/1/19			
4/1/19			
5/1/19			
6/1/19			
7/1/19			
8/1/19			
9/1/19			
10/1/19			
11/1/19			
12/1/19			

DATE	DESCRIPTION	AMOUNT	CHECK NO.
1/1/19			
2/1/19			
3/1/19			
4/1/19			
5/1/19			
6/1/19			
7/1/19			
8/1/19			
9/1/19			
10/1/19			
11/1/19			
12/1/19			

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 82.00	TO: 83.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 82.00 To 82.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 82.50 To 82.60	0.10	0.10	0	0
From 82.60 To 82.70	0.10	0.20	1	1
From 82.70 To 82.80	0.10	0.30	1	2
From 82.80 To 82.90	0.10	0.40	2	4
From 82.90 To 83.00	0.10	0.50	1	5
From 83.00 To 83.10	0.10	0.60	1	6
From 83.10 To 83.20	0.10	0.70	2	8
From 83.20 To 83.30	0.10	0.80	1	9
From 83.30 To 83.40	0.10	0.90	2	11
From 83.40 To 83.50	0.10	1.00	2	13

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT 1.5 RECOVERY 100

TOTAL BLOWS (after seating) 13 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.6' (82.0-82.6')

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/14/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 84.50	TO: 86.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 84.50 To 85.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 85.00 To 85.30	0.30	0.30	0	0
From 85.30 To 85.40	0.10	0.40	2	2
From 85.40 To 85.50	0.10	0.50	1	3
From 85.50 To 85.60	0.10	0.60	2	5
From 85.60 To 85.70	0.10	0.70	1	6
From 85.70 To 85.80	0.10	0.80	2	8
From 85.80 To 85.90	0.10	0.90	2	10
From 85.90 To 86.00	0.10	1.00	2	12
From To				
From To				

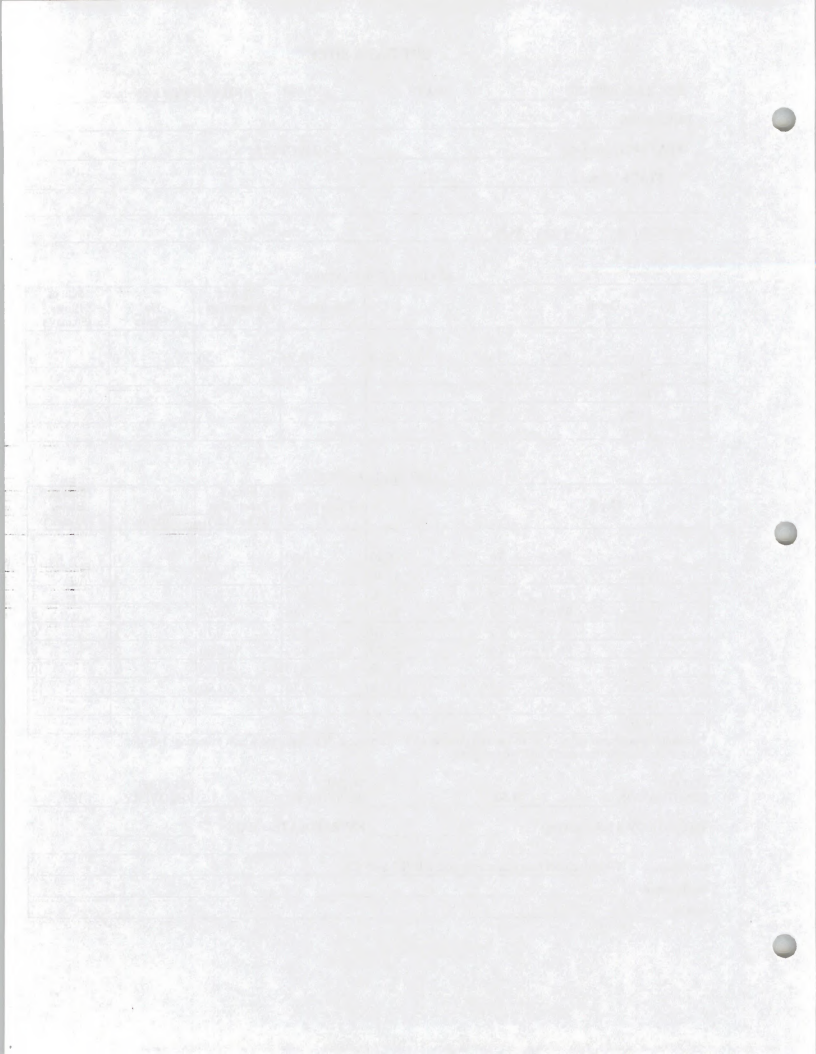
* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 12 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.8' (84.5-85.3')



SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/15/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 87.00

TO:

88.50

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 87.00 To 87.50	0.50	0.50	0	0
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 87.50 To 87.60	0.10	0.10	0	0
From 87.60 To 87.70	0.10	0.20	1	1
From 87.70 To 87.80	0.10	0.30	1	2
From 87.80 To 87.90	0.10	0.40	1	3
From 87.90 To 88.00	0.10	0.50	2	5
From 88.00 To 88.10	0.10	0.60	2	7
From 88.10 To 88.20	0.10	0.70	1	8
From 88.20 To 88.30	0.10	0.80	2	10
From 88.30 To 88.40	0.10	0.90	2	12
From 88.40 To 88.50	0.10	1.00	2	14

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

100

TOTAL BLOWS (after seating)

14

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.6' (87.0-87.6')

UNITED STATES OF AMERICA

DEPARTMENT OF COMMERCE BUREAU OF ECONOMIC ANALYSIS

STATE

DATE OF REPORT

REPORT NUMBER

REPORT TITLE

REPORT DATE

REPORT SUMMARY

REPORT NUMBER	REPORT TITLE	REPORT DATE
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2		
3		
4		
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REPORT SUMMARY

REPORT NUMBER	REPORT TITLE	REPORT DATE
1		
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10		

REPORT SUMMARY

REPORT NUMBER	REPORT TITLE	REPORT DATE
1		
2		
3		
4		
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SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 89.50	TO: 91.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 89.50 To 90.00	0.50	0.50	0	0
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 90.00 To 90.30	0.30	0.30	0	0
From 90.30 To 90.40	0.10	0.40	1	1
From 90.40 To 90.50	0.10	0.50	1	2
From 90.50 To 90.60	0.10	0.60	1	3
From 90.60 To 90.70	0.10	0.70	2	5
From 90.70 To 90.80	0.10	0.80	1	6
From 90.80 To 90.90	0.10	0.90	2	8
From 90.90 To 91.00	0.10	1.00	2	10
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 10 EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.8' (89.5-90.3')

1. The first part of the document is a list of the names of the people who were present at the meeting.

2. The second part of the document is a list of the topics that were discussed during the meeting.

Topic	Date	Time	Location
Topic 1	Date 1	Time 1	Location 1
Topic 2	Date 2	Time 2	Location 2

3. The third part of the document is a list of the actions that were taken during the meeting.

4. The fourth part of the document is a list of the conclusions that were reached during the meeting.

5. The fifth part of the document is a list of the recommendations that were made during the meeting.

6. The sixth part of the document is a list of the next steps that need to be taken.

7. The seventh part of the document is a list of the people who were responsible for the next steps.

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>92.00</u>	TO: <u>93.50</u>
------------	--------------------	------------------

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>92.00</u> To <u>92.50</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>92.50</u> To <u>92.80</u>	<u>0.30</u>	<u>0.30</u>	<u>0</u>	<u>0</u>
From <u>92.80</u> To <u>92.90</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>1</u>
From <u>92.90</u> To <u>93.00</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>2</u>
From <u>93.00</u> To <u>93.10</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>4</u>
From <u>93.10</u> To <u>93.20</u>	<u>0.10</u>	<u>0.70</u>	<u>1</u>	<u>5</u>
From <u>93.20</u> To <u>93.30</u>	<u>0.10</u>	<u>0.80</u>	<u>1</u>	<u>6</u>
From <u>93.30</u> To <u>93.40</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>8</u>
From <u>93.40</u> To <u>93.50</u>	<u>0.10</u>	<u>1.00</u>	<u>2</u>	<u>10</u>
From _____ To _____				
From _____ To _____				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 10 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

Weight of drill rods pushed sampler 0.8' (92.0-92.8')

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>94.50</u>	TO: <u>96.00</u>
------------	--------------------	------------------

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>94.50</u> To <u>95.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>95.00</u> To <u>95.90</u>	<u>0.90</u>	<u>0.90</u>	<u>0</u>	<u>0</u>
From <u>95.90</u> To <u>96.00</u>	<u>0.10</u>	<u>1.00</u>	<u>1</u>	<u>1</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 1 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 1.4' (94.5-95.9')

Page 1 of 1

1. Project Name _____

2. Project Number _____

3. Project Manager _____

4. Project Start Date _____

5. Project End Date _____

6. Project Status _____

7. Project Description _____

8. Project Objectives _____

9. Project Scope _____

10. Project Budget _____

11. Project Risks _____

12. Project Deliverables _____

13. Project Stakeholders _____

14. Project Communication _____

15. Project Reporting _____

16. Project Review _____

17. Project Approval _____

18. Project Sign-off _____

19. Project Closure _____

20. Project Archiving _____

21. Project Retention _____

22. Project Disposal _____

SPT DATA SHEET

HOLE NO. PR97-203

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 97.00

TO: 98.50

SEATING PENETRATION

Depth				Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From	97.00	To	97.50	0.50	0.50	0	0
From		To					
From		To					
From		To					
From		To					

TEST PENETRATION

Depth				Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From	97.50	To	98.30	0.80	0.80	0	0
From	98.30	To	98.40	0.10	0.90	2	2
From	98.40	To	98.50	0.10	1.00	2	4
From		To					
From		To					
From		To					
From		To					
From		To					
From		To					
From		To					

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

100

TOTAL BLOWS (after seating)

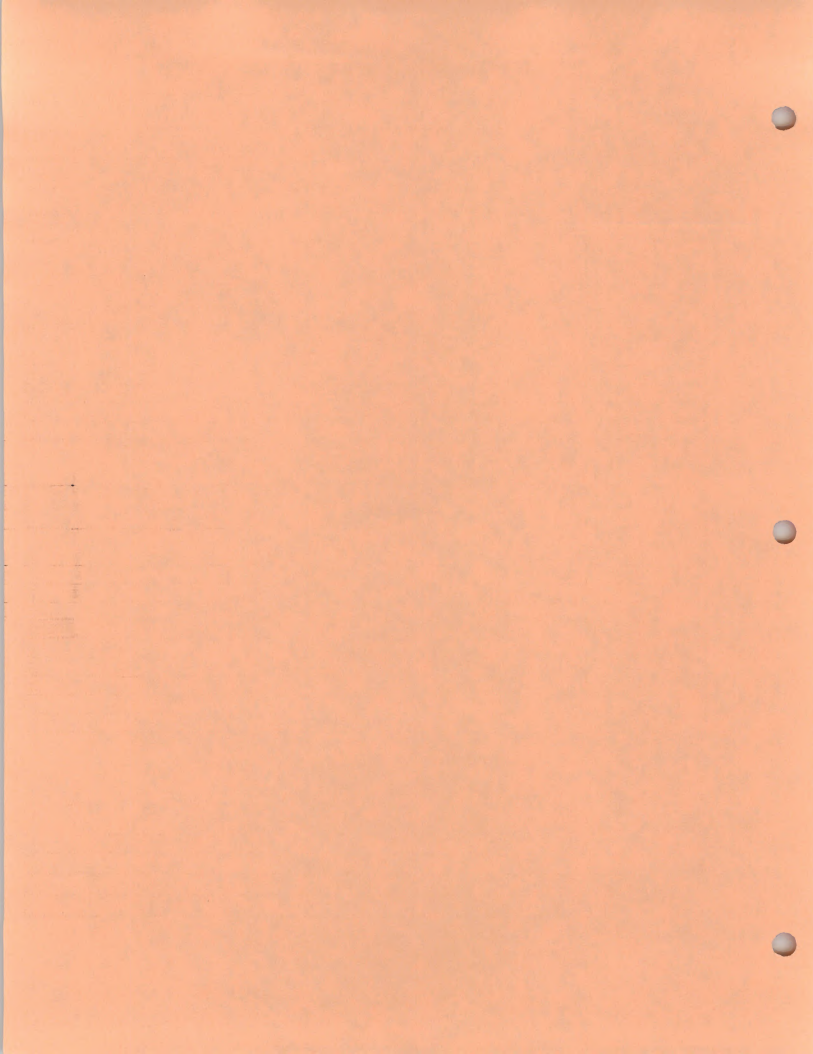
4

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 1.3' (97.0-98.3')

PR97-204



SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/15/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>4.50</u>	TO: <u>6.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>4.50</u> To <u>4.70</u>	<u>0.20</u>	<u>0.20</u>	<u>1</u>	<u>1</u>
From <u>4.70</u> To <u>4.90</u>	<u>0.20</u>	<u>0.40</u>	<u>1</u>	<u>2</u>
From <u>4.90</u> To <u>5.00</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>3</u>
From <u> </u> To <u> </u>				
From <u> </u> To <u> </u>				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>5.00</u> To <u>5.10</u>	<u>0.10</u>	<u>0.10</u>	<u>1</u>	<u>1</u>
From <u>5.10</u> To <u>5.20</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>2</u>
From <u>5.20</u> To <u>5.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>3</u>
From <u>5.30</u> To <u>5.40</u>	<u>0.10</u>	<u>0.40</u>	<u>2</u>	<u>5</u>
From <u>5.40</u> To <u>5.50</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>7</u>
From <u>5.50</u> To <u>5.60</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>9</u>
From <u>5.60</u> To <u>5.70</u>	<u>0.10</u>	<u>0.70</u>	<u>1</u>	<u>10</u>
From <u>5.70</u> To <u>5.80</u>	<u>0.10</u>	<u>0.80</u>	<u>2</u>	<u>12</u>
From <u>5.80</u> To <u>5.90</u>	<u>0.10</u>	<u>0.90</u>	<u>3</u>	<u>15</u>
From <u>5.90</u> To <u>6.00</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>18</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY 0.8

53

TOTAL BLOWS (after seating)

18

EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 9.50	TO: 11.00
------------	------------	-----------

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 9.50 To 9.60	0.10	0.10	1	1
From 9.60 To 9.70	0.10	0.20	2	3
From 9.70 To 9.80	0.10	0.30	2	5
From 9.80 To 9.90	0.10	0.40	1	6
From 9.90 To 10.00	0.10	0.50	1	7

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 10.00 To 10.10	0.10	0.10	1	1
From 10.10 To 10.20	0.10	0.20	1	2
From 10.20 To 10.30	0.10	0.30	1	3
From 10.30 To 10.40	0.10	0.40	1	4
From 10.40 To 10.50	0.10	0.50	2	6
From 10.50 To 10.60	0.10	0.60	1	7
From 10.60 To 10.70	0.10	0.70	1	8
From 10.70 To 10.80	0.10	0.80	2	10
From 10.80 To 10.90	0.10	0.90	2	12
From 10.90 To 11.00	0.10	1.00	2	14

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.0 PERCENT RECOVERY 0

TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. = _____

Description and classification of material.

Rock in shoe of sampler

UNIT 1

NAME: _____

DATE: _____

PERIOD: _____

LESSON 1

1. Write the name of the country in each box.

2. Write the name of the city in each box.

3. Write the name of the state in each box.

4. Write the name of the country in each box.

5. Write the name of the city in each box.

6. Write the name of the state in each box.

7. Write the name of the country in each box.

8. Write the name of the city in each box.

9. Write the name of the state in each box.

10. Write the name of the country in each box.

Country	City	State	Country	City	State
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		

Country	City	State	Country	City	State
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		
16			16		
17			17		
18			18		
19			19		
20			20		

Country	City	State	Country	City	State
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		
16			16		
17			17		
18			18		
19			19		
20			20		

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 14.50	TO: 16.00
------------	-------------	-----------

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 14.50 To 14.70	0.20	0.20	1	1
From 14.70 To 14.80	0.10	0.30	1	2
From 14.80 To 14.90	0.10	0.40	1	3
From 14.90 To 15.00	0.10	0.50	1	4
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 15.00 To 15.10	0.10	0.10	1	1
From 15.10 To 15.20	0.10	0.20	1	2
From 15.20 To 15.30	0.10	0.30	1	3
From 15.30 To 15.40	0.10	0.40	1	4
From 15.40 To 15.50	0.10	0.50	1	5
From 15.50 To 15.60	0.10	0.60	1	6
From 15.60 To 15.70	0.10	0.70	1	7
From 15.70 To 15.80	0.10	0.80	1	8
From 15.80 To 15.90	0.10	0.90	1	9
From 15.90 To 16.00	0.10	1.00	1	10

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.9 PERCENT RECOVERY 60

TOTAL BLOWS (after seating) 10 EXTRAPOLATED VAL. =

Description and
classification of
material.

DATE	TIME	LOCATION	WIND	WAVE	SEA
1	10	100	10	10	10
2	11	110	11	11	11
3	12	120	12	12	12
4	13	130	13	13	13

DATE	TIME	LOCATION	WIND	WAVE	SEA
1	14	140	14	14	14
2	15	150	15	15	15
3	16	160	16	16	16
4	17	170	17	17	17
5	18	180	18	18	18
6	19	190	19	19	19
7	20	200	20	20	20
8	21	210	21	21	21
9	22	220	22	22	22
10	23	230	23	23	23

DATE	TIME	LOCATION	WIND	WAVE	SEA
1	24	240	24	24	24
2	25	250	25	25	25
3	26	260	26	26	26
4	27	270	27	27	27
5	28	280	28	28	28
6	29	290	29	29	29
7	30	300	30	30	30

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>19.50</u>	TO: <u>21.00</u>
------------	--------------------	------------------

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 19.50 To 19.60	0.10	0.10	1	1
From 19.60 To 19.70	0.10	0.20	1	2
From 19.70 To 19.80	0.10	0.30	1	3
From 19.80 To 19.90	0.10	0.40	1	4
From 19.90 To 20.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 20.00 To 20.10	0.10	0.10	1	1
From 20.10 To 20.20	0.10	0.20	2	3
From 20.20 To 20.30	0.10	0.30	2	5
From 20.30 To 20.40	0.10	0.40	1	6
From 20.40 To 20.50	0.10	0.50	2	8
From 20.50 To 20.60	0.10	0.60	2	10
From 20.60 To 20.70	0.10	0.70	2	12
From 20.70 To 20.80	0.10	0.80	2	14
From 20.80 To 20.90	0.10	0.90	3	17
From 20.90 To 21.00	0.10	1.00	2	19

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.8 PERCENT RECOVERY 53

TOTAL BLOWS (after seating) 19 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

THE 1940-1941 Year

NAME _____ DATE _____

STUDENT NO. _____ GRADE _____

DATE	TIME	PLACE	REMARKS
1			
2			
3			
4			
5			

DATE	TIME	PLACE	REMARKS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			

NO. OF DAYS _____

DATE	TIME	PLACE	REMARKS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
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19			
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21			
22			
23			
24			
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26			
27			
28			
29			
30			
31			

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/15/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>24.50</u>	TO: <u>26.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>24.50</u> To <u>24.60</u>	0.10	0.10	1	1
From <u>24.60</u> To <u>24.70</u>	0.10	0.20	1	2
From <u>24.70</u> To <u>24.80</u>	0.10	0.30	1	3
From <u>24.80</u> To <u>24.90</u>	0.10	0.40	1	4
From <u>24.90</u> To <u>25.00</u>	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>25.00</u> To <u>25.10</u>	0.10	0.10	1	1
From <u>25.10</u> To <u>25.20</u>	0.10	0.20	2	3
From <u>25.20</u> To <u>25.30</u>	0.10	0.30	1	4
From <u>25.30</u> To <u>25.40</u>	0.10	0.40	2	6
From <u>25.40</u> To <u>25.50</u>	0.10	0.50	2	8
From <u>25.50</u> To <u>25.60</u>	0.10	0.60	1	9
From <u>25.60</u> To <u>25.70</u>	0.10	0.70	2	11
From <u>25.70</u> To <u>25.80</u>	0.10	0.80	2	13
From <u>25.80</u> To <u>25.90</u>	0.10	0.90	3	16
From <u>25.90</u> To <u>26.00</u>	0.10	1.00	4	20

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 20 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

UNITED STATES

IN SENATE, January 10, 1907.

REPORT

OF THE

COMMISSIONER OF THE GENERAL LAND OFFICE

FOR THE YEAR 1906.

WASHINGTON: GOVERNMENT PRINTING OFFICE: 1907.

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For sale by the Superintendent of Documents.

Check or money order payable to the Superintendent of Documents.

For sale by the Superintendent of Documents.

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/15/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 29.50	TO: 31.00
------------	-------------	-----------

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 29.50 To 29.70	0.20	0.20	1	1
From 29.70 To 29.80	0.10	0.30	1	2
From 29.80 To 29.90	0.10	0.40	1	3
From 29.90 To 30.00	0.10	0.50	1	4
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 30.00 To 30.10	0.10	0.10	1	1
From 30.10 To 30.20	0.10	0.20	2	3
From 30.20 To 30.30	0.10	0.30	2	5
From 30.30 To 30.40	0.10	0.40	2	7
From 30.40 To 30.50	0.10	0.50	2	9
From 30.50 To 30.60	0.10	0.60	2	11
From 30.60 To 30.70	0.10	0.70	2	13
From 30.70 To 30.80	0.10	0.80	3	16
From 30.80 To 30.90	0.10	0.90	3	19
From 30.90 To 31.00	0.10	1.00	2	21

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 21 EXTRAPOLATED VAL. =

Description and classification of material.

Item No.	Item Description	Quantity	Unit Price	Total Price
1
2
3
4

Item No.	Item Description	Quantity	Unit Price	Total Price
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

...
...
...

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 35.50	TO: 37.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 35.50 To 35.80	0.30	0.30	0	0
From 35.80 To 35.90	0.10	0.40	1	1
From 35.90 To 36.00	0.10	0.50	1	2
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 36.00 To 36.10	0.10	0.10	1	1
From 36.10 To 36.20	0.10	0.20	1	2
From 36.20 To 36.30	0.10	0.30	1	3
From 36.30 To 36.40	0.10	0.40	1	4
From 36.40 To 36.50	0.10	0.50	1	5
From 36.50 To 36.60	0.10	0.60	1	6
From 36.60 To 36.70	0.10	0.70	1	7
From 36.70 To 36.80	0.10	0.80	1	8
From 36.80 To 36.90	0.10	0.90	1	9
From 36.90 To 37.00	0.10	1.00	1	10

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.3 PERCENT RECOVERY 87

TOTAL BLOWS (after seating) 10 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.3' (35.5-35.8')

UNITED STATES OF AMERICA

Department of Justice

Office of the Inspector General

Washington, D.C. 20535

January 1, 1998

Dear Sir:

Re: [Redacted]

Enclosed for you are:

1. [Redacted]

2. [Redacted]

3. [Redacted]

4. [Redacted]

5. [Redacted]

6. [Redacted]

7. [Redacted]

8. [Redacted]

9. [Redacted]

10. [Redacted]

11. [Redacted]

12. [Redacted]

13. [Redacted]

14. [Redacted]

15. [Redacted]

16. [Redacted]

17. [Redacted]

18. [Redacted]

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20. [Redacted]

21. [Redacted]

22. [Redacted]

23. [Redacted]

24. [Redacted]

25. [Redacted]

26. [Redacted]

27. [Redacted]

28. [Redacted]

29. [Redacted]

30. [Redacted]

31. [Redacted]

32. [Redacted]

33. [Redacted]

34. [Redacted]

35. [Redacted]

36. [Redacted]

37. [Redacted]

38. [Redacted]

39. [Redacted]

40. [Redacted]

41. [Redacted]

42. [Redacted]

43. [Redacted]

44. [Redacted]

45. [Redacted]

46. [Redacted]

47. [Redacted]

48. [Redacted]

49. [Redacted]

50. [Redacted]

51. [Redacted]

52. [Redacted]

53. [Redacted]

54. [Redacted]

55. [Redacted]

56. [Redacted]

57. [Redacted]

58. [Redacted]

59. [Redacted]

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62. [Redacted]

63. [Redacted]

64. [Redacted]

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66. [Redacted]

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72. [Redacted]

73. [Redacted]

74. [Redacted]

75. [Redacted]

76. [Redacted]

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78. [Redacted]

79. [Redacted]

80. [Redacted]

81. [Redacted]

82. [Redacted]

83. [Redacted]

84. [Redacted]

85. [Redacted]

86. [Redacted]

87. [Redacted]

88. [Redacted]

89. [Redacted]

90. [Redacted]

91. [Redacted]

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93. [Redacted]

94. [Redacted]

95. [Redacted]

96. [Redacted]

97. [Redacted]

98. [Redacted]

99. [Redacted]

100. [Redacted]

101. [Redacted]

102. [Redacted]

103. [Redacted]

104. [Redacted]

105. [Redacted]

106. [Redacted]

107. [Redacted]

108. [Redacted]

109. [Redacted]

110. [Redacted]

111. [Redacted]

112. [Redacted]

113. [Redacted]

114. [Redacted]

115. [Redacted]

116. [Redacted]

117. [Redacted]

118. [Redacted]

119. [Redacted]

120. [Redacted]

121. [Redacted]

122. [Redacted]

123. [Redacted]

124. [Redacted]

125. [Redacted]

126. [Redacted]

127. [Redacted]

128. [Redacted]

129. [Redacted]

130. [Redacted]

131. [Redacted]

132. [Redacted]

133. [Redacted]

134. [Redacted]

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139. [Redacted]

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144. [Redacted]

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146. [Redacted]

147. [Redacted]

148. [Redacted]

149. [Redacted]

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151. [Redacted]

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161. [Redacted]

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163. [Redacted]

164. [Redacted]

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166. [Redacted]

167. [Redacted]

168. [Redacted]

169. [Redacted]

170. [Redacted]

171. [Redacted]

172. [Redacted]

173. [Redacted]

174. [Redacted]

175. [Redacted]

176. [Redacted]

177. [Redacted]

178. [Redacted]

179. [Redacted]

180. [Redacted]

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182. [Redacted]

183. [Redacted]

184. [Redacted]

185. [Redacted]

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192. [Redacted]

193. [Redacted]

194. [Redacted]

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197. [Redacted]

198. [Redacted]

199. [Redacted]

200. [Redacted]

201. [Redacted]

202. [Redacted]

203. [Redacted]

204. [Redacted]

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206. [Redacted]

207. [Redacted]

208. [Redacted]

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210. [Redacted]

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212. [Redacted]

213. [Redacted]

214. [Redacted]

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219. [Redacted]

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221. [Redacted]

222. [Redacted]

223. [Redacted]

224. [Redacted]

225. [Redacted]

226. [Redacted]

227. [Redacted]

228. [Redacted]

229. [Redacted]

230. [Redacted]

231. [Redacted]

232. [Redacted]

233. [Redacted]

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245. [Redacted]

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247. [Redacted]

248. [Redacted]

249. [Redacted]

250. [Redacted]

251. [Redacted]

252. [Redacted]

253. [Redacted]

254. [Redacted]

255. [Redacted]

256. [Redacted]

257. [Redacted]

258. [Redacted]

259. [Redacted]

260. [Redacted]

261. [Redacted]

262. [Redacted]

263. [Redacted]

264. [Redacted]

265. [Redacted]

266. [Redacted]

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 37.00	TO: 38.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 37.00 To 37.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 37.50 To 38.20	0.70	0.70	0	0
From 38.20 To 38.30	0.10	0.80	1	1
From 38.30 To 38.40	0.10	0.90	2	3
From 38.40 To 38.50	0.10	1.00	3	6
From To				
From To				
From To				
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 6 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 1.2' (37.0-38.2')

UNITED STATES

DEPARTMENT OF COMMERCE

STANDARD

FORM NO. 1

1963 EDITION

1. NAME OF FIRM

2. ADDRESS

3. CITY

4. STATE

5. ZIP

PRODUCT INFORMATION

1. NAME OF PRODUCT	2. QUANTITY PRODUCED (ESTIMATE)	3. DATE OF PRODUCTION	4. DATE OF SALE	5. DATE OF PURCHASE

FINANCIAL INFORMATION

1. NAME OF FIRM	2. QUANTITY PRODUCED (ESTIMATE)	3. DATE OF PRODUCTION	4. DATE OF SALE	5. DATE OF PURCHASE

6. NAME OF FIRM (if different from 1. NAME OF FIRM) 7. ADDRESS (if different from 2. ADDRESS)

8. CITY

9. STATE

10. ZIP

11. NAME OF FIRM (if different from 1. NAME OF FIRM)

12. ADDRESS (if different from 2. ADDRESS)

13. NAME OF FIRM

14. ADDRESS

15. CITY

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 39.50	TO: 41.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 39.50 To 39.70	0.20	0.20	0	0
From 39.70 To 39.80	0.10	0.30	1	1
From 39.80 To 39.90	0.10	0.40	2	3
From 39.90 To 40.00	0.10	0.50	2	5
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 40.00 To 40.10	0.10	0.10	2	2
From 40.10 To 40.20	0.10	0.20	2	4
From 40.20 To 40.30	0.10	0.30	2	6
From 40.30 To 40.40	0.10	0.40	3	9
From 40.40 To 40.50	0.10	0.50	2	11
From 40.50 To 40.60	0.10	0.60	2	13
From 40.60 To 40.70	0.10	0.70	3	16
From 40.70 To 40.80	0.10	0.80	2	18
From 40.80 To 40.90	0.10	0.90	3	21
From 40.90 To 41.00	0.10	1.00	4	25

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.3 PERCENT RECOVERY 87

TOTAL BLOWS (after seating) 25 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.2' (39.5-39.7')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 42.00	TO: 43.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 42.00 To 42.20	0.20	0.20	0	0
From 42.20 To 42.30	0.10	0.30	1	1
From 42.30 To 42.40	0.10	0.40	1	2
From 42.40 To 42.50	0.10	0.50	1	3
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 42.50 To 42.60	0.10	0.10	1	1
From 42.60 To 42.70	0.10	0.20	2	3
From 42.70 To 42.80	0.10	0.30	2	5
From 42.80 To 42.90	0.10	0.40	2	7
From 42.90 To 43.00	0.10	0.50	2	9
From 43.00 To 43.10	0.10	0.60	2	11
From 43.10 To 43.20	0.10	0.70	2	13
From 43.20 To 43.30	0.10	0.80	2	15
From 43.30 To 43.40	0.10	0.90	2	17
From 43.40 To 43.50	0.10	1.00	3	20

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.4 PERCENT RECOVERY 93

TOTAL BLOWS (after seating) 20 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.2' (42.0-42.2')

NAME: [REDACTED] ADDRESS: [REDACTED] CITY: [REDACTED] STATE: [REDACTED] ZIP: [REDACTED]

DATE OF BIRTH: [REDACTED] SEX: [REDACTED] RACE: [REDACTED] RELIGION: [REDACTED]

EDUCATION: [REDACTED] OCCUPATION: [REDACTED] INCOME: [REDACTED]

PREVIOUS RESIDENCES: [REDACTED] CURRENT RESIDENCE: [REDACTED]

TELEPHONE: [REDACTED] FAX: [REDACTED] E-MAIL: [REDACTED]

VEHICLE REGISTRATION: [REDACTED] DRIVER'S LICENSE: [REDACTED]

CRIMINAL RECORD: [REDACTED] CIVIL RECORD: [REDACTED]

NAME	ADDRESS	CITY	STATE	ZIP
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
6	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
7	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
8	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
9	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

NAME	ADDRESS	CITY	STATE	ZIP
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
6	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
7	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
8	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
9	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

NAME: [REDACTED] ADDRESS: [REDACTED] CITY: [REDACTED] STATE: [REDACTED] ZIP: [REDACTED]

DATE OF BIRTH: [REDACTED] SEX: [REDACTED] RACE: [REDACTED] RELIGION: [REDACTED]

EDUCATION: [REDACTED] OCCUPATION: [REDACTED] INCOME: [REDACTED]

PREVIOUS RESIDENCES: [REDACTED] CURRENT RESIDENCE: [REDACTED]

TELEPHONE: [REDACTED] FAX: [REDACTED] E-MAIL: [REDACTED]

VEHICLE REGISTRATION: [REDACTED] DRIVER'S LICENSE: [REDACTED]

CRIMINAL RECORD: [REDACTED] CIVIL RECORD: [REDACTED]

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 44.50	TO: 46.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 44.50 To 44.70	0.20	0.20	0	0
From 44.70 To 44.80	0.10	0.30	1	1
From 44.80 To 44.90	0.10	0.40	1	2
From 44.90 To 45.00	0.10	0.50	1	3
From	To			

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 45.00 To 45.10	0.10	0.10	1	1
From 45.10 To 45.20	0.10	0.20	1	2
From 45.20 To 45.30	0.10	0.30	1	3
From 45.30 To 45.40	0.10	0.40	2	5
From 45.40 To 45.50	0.10	0.50	2	7
From 45.50 To 45.60	0.10	0.60	2	9
From 45.60 To 45.70	0.10	0.70	2	11
From 45.70 To 45.80	0.10	0.80	2	13
From 45.80 To 45.90	0.10	0.90	2	15
From 45.90 To 46.00	0.10	1.00	3	18

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	87
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TOTAL BLOWS (after seating) 18 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.2' (44.5-44.7')

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	12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SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 47.00	TO: 48.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 47.00 To 47.30	0.30	0.30	0	0
From 47.30 To 47.40	0.10	0.40	1	1
From 47.40 To 47.50	0.10	0.50	1	2
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 47.50 To 47.60	0.10	0.10	1	1
From 47.60 To 47.70	0.10	0.20	1	2
From 47.70 To 47.80	0.10	0.30	2	4
From 47.80 To 47.90	0.10	0.40	2	6
From 47.90 To 48.00	0.10	0.50	2	8
From 48.00 To 48.10	0.10	0.60	2	10
From 48.10 To 48.20	0.10	0.70	2	12
From 48.20 To 48.30	0.10	0.80	2	14
From 48.30 To 48.40	0.10	0.90	2	16
From 48.40 To 48.50	0.10	1.00	2	18

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

87

TOTAL BLOWS (after seating)

18

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.3' (47.0-47.3')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>49.50</u>	TO: <u>51.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>49.50</u> To <u>49.70</u>	<u>0.20</u>	<u>0.20</u>	<u>0</u>	<u>0</u>
From <u>49.70</u> To <u>49.80</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>1</u>
From <u>49.80</u> To <u>49.90</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>2</u>
From <u>49.90</u> To <u>50.00</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>3</u>
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>50.00</u> To <u>50.10</u>	<u>0.10</u>	<u>0.10</u>	<u>2</u>	<u>2</u>
From <u>50.10</u> To <u>50.20</u>	<u>0.10</u>	<u>0.20</u>	<u>2</u>	<u>4</u>
From <u>50.20</u> To <u>50.30</u>	<u>0.10</u>	<u>0.30</u>	<u>2</u>	<u>6</u>
From <u>50.30</u> To <u>50.40</u>	<u>0.10</u>	<u>0.40</u>	<u>2</u>	<u>8</u>
From <u>50.40</u> To <u>50.50</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>10</u>
From <u>50.50</u> To <u>50.60</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>12</u>
From <u>50.60</u> To <u>50.70</u>	<u>0.10</u>	<u>0.70</u>	<u>2</u>	<u>14</u>
From <u>50.70</u> To <u>50.80</u>	<u>0.10</u>	<u>0.80</u>	<u>3</u>	<u>17</u>
From <u>50.80</u> To <u>50.90</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>19</u>
From <u>50.90</u> To <u>51.00</u>	<u>0.10</u>	<u>1.00</u>	<u>4</u>	<u>23</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.3 PERCENT RECOVERY 87

TOTAL BLOWS (after seating) 23 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

Weight of drill rods pushed sampler 0.2' (49.5-49.7')

DATE	TIME	LOCATION	REMARKS
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DATE	TIME	LOCATION	REMARKS
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SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 52.00	TO: 53.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 52.00 To 52.30	0.30	0.30	0	0
From 52.30 To 52.40	0.10	0.40	1	1
From 52.40 To 52.50	0.10	0.50	1	2
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 52.50 To 52.60	0.10	0.10	1	1
From 52.60 To 52.70	0.10	0.20	1	2
From 52.70 To 52.80	0.10	0.30	1	3
From 52.80 To 52.90	0.10	0.40	2	5
From 52.90 To 53.00	0.10	0.50	2	7
From 53.00 To 53.10	0.10	0.60	3	10
From 53.10 To 53.20	0.10	0.70	2	12
From 53.20 To 53.30	0.10	0.80	1	13
From 53.30 To 53.40	0.10	0.90	3	16
From 53.40 To 53.50	0.10	1.00	2	18

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 18 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 0.3' (52.0-52.3')

Year	Amount	Percentage	Notes
1990	100	100	
1991	100	100	
1992	100	100	
1993	100	100	
1994	100	100	
1995	100	100	
1996	100	100	
1997	100	100	
1998	100	100	
1999	100	100	
2000	100	100	
2001	100	100	
2002	100	100	
2003	100	100	
2004	100	100	
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2006	100	100	
2007	100	100	
2008	100	100	
2009	100	100	
2010	100	100	
2011	100	100	
2012	100	100	
2013	100	100	
2014	100	100	
2015	100	100	
2016	100	100	
2017	100	100	
2018	100	100	
2019	100	100	
2020	100	100	
2021	100	100	
2022	100	100	
2023	100	100	
2024	100	100	
2025	100	100	
2026	100	100	
2027	100	100	
2028	100	100	
2029	100	100	
2030	100	100	

Year	Amount	Percentage	Notes
1990	100	100	
1991	100	100	
1992	100	100	
1993	100	100	
1994	100	100	
1995	100	100	
1996	100	100	
1997	100	100	
1998	100	100	
1999	100	100	
2000	100	100	
2001	100	100	
2002	100	100	
2003	100	100	
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2005	100	100	
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2007	100	100	
2008	100	100	
2009	100	100	
2010	100	100	
2011	100	100	
2012	100	100	
2013	100	100	
2014	100	100	
2015	100	100	
2016	100	100	
2017	100	100	
2018	100	100	
2019	100	100	
2020	100	100	
2021	100	100	
2022	100	100	
2023	100	100	
2024	100	100	
2025	100	100	
2026	100	100	
2027	100	100	
2028	100	100	
2029	100	100	
2030	100	100	

Year	Amount	Percentage	Notes
1990	100	100	
1991	100	100	
1992	100	100	
1993	100	100	
1994	100	100	
1995	100	100	
1996	100	100	
1997	100	100	
1998	100	100	
1999	100	100	
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2005	100	100	
2006	100	100	
2007	100	100	
2008	100	100	
2009	100	100	
2010	100	100	
2011	100	100	
2012	100	100	
2013	100	100	
2014	100	100	
2015	100	100	
2016	100	100	
2017	100	100	
2018	100	100	
2019	100	100	
2020	100	100	
2021	100	100	
2022	100	100	
2023	100	100	
2024	100	100	
2025	100	100	
2026	100	100	
2027	100	100	
2028	100	100	
2029	100	100	
2030	100	100	

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 54.50	TO: 56.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 54.50 To 54.70	0.20	0.20	0	0
From 54.70 To 54.80	0.10	0.30	1	1
From 54.80 To 54.90	0.10	0.40	1	2
From 54.90 To 55.00	0.10	0.50	1	3
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 55.00 To 55.10	0.10	0.10	1	1
From 55.10 To 55.20	0.10	0.20	2	3
From 55.20 To 55.30	0.10	0.30	2	5
From 55.30 To 55.40	0.10	0.40	2	7
From 55.40 To 55.50	0.10	0.50	2	9
From 55.50 To 55.60	0.10	0.60	2	11
From 55.60 To 55.70	0.10	0.70	3	14
From 55.70 To 55.80	0.10	0.80	2	16
From 55.80 To 55.90	0.10	0.90	2	18
From 55.90 To 56.00	0.10	1.00	3	21

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 21 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.2' (54.5-54.7')

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Page 1 of 1

Page 1 of 1

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Page 1 of 1

Station	Time	Location	Remarks
1	10:00	1000	1000
2	10:05	1005	1005
3	10:10	1010	1010
4	10:15	1015	1015
5	10:20	1020	1020

Station	Time	Location	Remarks
1	10:25	1025	1025
2	10:30	1030	1030
3	10:35	1035	1035
4	10:40	1040	1040
5	10:45	1045	1045
6	10:50	1050	1050
7	10:55	1055	1055
8	11:00	1100	1100
9	11:05	1105	1105
10	11:10	1110	1110
11	11:15	1115	1115
12	11:20	1120	1120
13	11:25	1125	1125
14	11:30	1130	1130
15	11:35	1135	1135
16	11:40	1140	1140
17	11:45	1145	1145
18	11:50	1150	1150
19	11:55	1155	1155
20	12:00	1200	1200

Page 1 of 1

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Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Station	Time	Location	Remarks
1	12:05	1205	1205
2	12:10	1210	1210
3	12:15	1215	1215
4	12:20	1220	1220
5	12:25	1225	1225
6	12:30	1230	1230
7	12:35	1235	1235
8	12:40	1240	1240
9	12:45	1245	1245
10	12:50	1250	1250
11	12:55	1255	1255
12	13:00	1300	1300
13	13:05	1305	1305
14	13:10	1310	1310
15	13:15	1315	1315
16	13:20	1320	1320
17	13:25	1325	1325
18	13:30	1330	1330
19	13:35	1335	1335
20	13:40	1340	1340
21	13:45	1345	1345
22	13:50	1350	1350
23	13:55	1355	1355
24	14:00	1400	1400

Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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Station	Time	Location	Remarks
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SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>57.00</u>	TO: <u>58.50</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>57.00</u> To <u>57.30</u>	<u>0.30</u>	<u>0.30</u>	<u>0</u>	<u>0</u>
From <u>57.30</u> To <u>57.40</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>1</u>
From <u>57.40</u> To <u>57.50</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>2</u>
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>57.50</u> To <u>57.60</u>	<u>0.10</u>	<u>0.10</u>	<u>1</u>	<u>1</u>
From <u>57.60</u> To <u>57.70</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>2</u>
From <u>57.70</u> To <u>57.80</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>3</u>
From <u>57.80</u> To <u>57.90</u>	<u>0.10</u>	<u>0.40</u>	<u>2</u>	<u>5</u>
From <u>57.90</u> To <u>58.00</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>6</u>
From <u>58.00</u> To <u>58.10</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>8</u>
From <u>58.10</u> To <u>58.20</u>	<u>0.10</u>	<u>0.70</u>	<u>1</u>	<u>9</u>
From <u>58.20</u> To <u>58.30</u>	<u>0.10</u>	<u>0.80</u>	<u>2</u>	<u>11</u>
From <u>58.30</u> To <u>58.40</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>13</u>
From <u>58.40</u> To <u>58.50</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>16</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 16 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 0.3' (57.0-57.3')

DATE	DESCRIPTION	AMOUNT	CHECK NO.
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DATE	DESCRIPTION	AMOUNT	CHECK NO.
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DATE	DESCRIPTION	AMOUNT	CHECK NO.
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SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 59.50

TO:

61.00

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 59.50 To 59.80	0.30	0.30	0	0
From 59.80 To 59.90	0.10	0.40	1	1
From 59.90 To 60.00	0.10	0.50	1	2
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 60.00 To 60.10	0.10	0.10	1	1
From 60.10 To 60.20	0.10	0.20	1	2
From 60.20 To 60.30	0.10	0.30	2	4
From 60.30 To 60.40	0.10	0.40	2	6
From 60.40 To 60.50	0.10	0.50	2	8
From 60.50 To 60.60	0.10	0.60	2	10
From 60.60 To 60.70	0.10	0.70	2	12
From 60.70 To 60.80	0.10	0.80	3	15
From 60.80 To 60.90	0.10	0.90	2	17
From 60.90 To 61.00	0.10	1.00	3	20

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

47

TOTAL BLOWS (after seating)

20

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.3' (59.5-59.8')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 62.00	TO: 63.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 62.00 To 62.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 62.50 To 62.80	0.30	0.30	0	0
From 62.80 To 62.90	0.10	0.40	1	1
From 62.90 To 63.00	0.10	0.50	2	3
From 63.00 To 63.10	0.10	0.60	1	4
From 63.10 To 63.20	0.10	0.70	1	5
From 63.20 To 63.30	0.10	0.80	2	7
From 63.30 To 63.40	0.10	0.90	2	9
From 63.40 To 63.50	0.10	1.00	2	11
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.3 PERCENT RECOVERY 87

TOTAL BLOWS (after seating) 11 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.8' (62.0-62.8')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 64.50	TO: 66.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 64.50 To 65.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 65.00 To 65.10	0.10	0.10	1	1
From 65.10 To 65.20	0.10	0.20	2	3
From 65.20 To 65.30	0.10	0.30	1	4
From 65.30 To 65.40	0.10	0.40	1	5
From 65.40 To 65.50	0.10	0.50	2	7
From 65.50 To 65.60	0.10	0.60	1	8
From 65.60 To 65.70	0.10	0.70	2	10
From 65.70 To 65.80	0.10	0.80	2	12
From 65.80 To 65.90	0.10	0.90	2	14
From 65.90 To 66.00	0.10	1.00	2	16

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 16 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.5' (64.5-65.0')

STATE OF TEXAS

COUNTY OF _____

NAME	ADDRESS	CITY	STATE	ZIP

NAME	ADDRESS	CITY	STATE	ZIP

NAME	ADDRESS	CITY	STATE	ZIP

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 67.00	TO: 68.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 67.00 To 67.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 67.50 To 67.60	0.10	0.10	1	1
From 67.60 To 67.70	0.10	0.20	1	2
From 67.70 To 67.80	0.10	0.30	2	4
From 67.80 To 67.90	0.10	0.40	1	5
From 67.90 To 68.00	0.10	0.50	2	7
From 68.00 To 68.10	0.10	0.60	1	8
From 68.10 To 68.20	0.10	0.70	2	10
From 68.20 To 68.30	0.10	0.80	2	12
From 68.30 To 68.40	0.10	0.90	2	14
From 68.40 To 68.50	0.10	1.00	2	16

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY 1.5

100

TOTAL BLOWS (after seating)

16

EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.5' (67.0-67.5')

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SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>69.50</u>	TO: <u>71.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>69.50</u> To <u>70.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>70.00</u> To <u>70.10</u>	<u>0.10</u>	<u>0.10</u>	<u>0</u>	<u>0</u>
From <u>70.10</u> To <u>70.20</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>1</u>
From <u>70.20</u> To <u>70.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>2</u>
From <u>70.30</u> To <u>70.40</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>3</u>
From <u>70.40</u> To <u>70.50</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>4</u>
From <u>70.50</u> To <u>70.60</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>6</u>
From <u>70.60</u> To <u>70.70</u>	<u>0.10</u>	<u>0.70</u>	<u>2</u>	<u>8</u>
From <u>70.70</u> To <u>70.80</u>	<u>0.10</u>	<u>0.80</u>	<u>2</u>	<u>10</u>
From <u>70.80</u> To <u>70.90</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>12</u>
From <u>70.90</u> To <u>71.00</u>	<u>0.10</u>	<u>1.00</u>	<u>2</u>	<u>14</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.9 PERCENT RECOVERY 60

TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

Weight of drill rods pushed sampler 0.6' (69.5-70.1')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 72.00	TO: 73.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 72.00 To 72.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 72.50 To 72.60	0.10	0.10	1	1
From 72.60 To 72.70	0.10	0.20	1	2
From 72.70 To 72.80	0.10	0.30	1	3
From 72.80 To 72.90	0.10	0.40	1	4
From 72.90 To 73.00	0.10	0.50	2	6
From 73.00 To 73.10	0.10	0.60	1	7
From 73.10 To 73.20	0.10	0.70	1	8
From 73.20 To 73.30	0.10	0.80	2	10
From 73.30 To 73.40	0.10	0.90	2	12
From 73.40 To 73.50	0.10	1.00	2	14

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 0.5' (72.0-72.5')

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10

10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/17/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 74.50

TO:

76.00

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>74.50</u> To <u>75.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>75.00</u> To <u>75.10</u>	<u>0.10</u>	<u>0.10</u>	<u>0</u>	<u>0</u>
From <u>75.10</u> To <u>75.20</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>1</u>
From <u>75.20</u> To <u>75.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>2</u>
From <u>75.30</u> To <u>75.40</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>3</u>
From <u>75.40</u> To <u>75.50</u>	<u>0.10</u>	<u>0.50</u>	<u>1</u>	<u>4</u>
From <u>75.50</u> To <u>75.60</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>6</u>
From <u>75.60</u> To <u>75.70</u>	<u>0.10</u>	<u>0.70</u>	<u>1</u>	<u>7</u>
From <u>75.70</u> To <u>75.80</u>	<u>0.10</u>	<u>0.80</u>	<u>1</u>	<u>8</u>
From <u>75.80</u> To <u>75.90</u>	<u>0.10</u>	<u>0.90</u>	<u>1</u>	<u>9</u>
From <u>75.90</u> To <u>76.00</u>	<u>0.10</u>	<u>1.00</u>	<u>1</u>	<u>10</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

93

TOTAL BLOWS (after seating)

10

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.6' (74.5-75.1')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>77.00</u>	TO: <u>78.50</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>77.00</u> To <u>77.50</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>77.50</u> To <u>78.40</u>	<u>0.90</u>	<u>0.90</u>	<u>0</u>	<u>0</u>
From <u>78.40</u> To <u>78.50</u>	<u>0.10</u>	<u>1.00</u>	<u>1</u>	<u>1</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY

100

TOTAL BLOWS (after seating)

1

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 1.4' (77.0-78.4')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>79.50</u>	TO: <u>81.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>79.50</u> To <u>80.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From <u> </u> To <u> </u>				
From <u> </u> To <u> </u>				
From <u> </u> To <u> </u>				
From <u> </u> To <u> </u>				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>80.00</u> To <u>80.10</u>	<u>0.10</u>	<u>0.10</u>	<u>1</u>	<u>1</u>
From <u>80.10</u> To <u>80.20</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>2</u>
From <u>80.20</u> To <u>80.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>3</u>
From <u>80.30</u> To <u>80.40</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>4</u>
From <u>80.40</u> To <u>80.50</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>6</u>
From <u>80.50</u> To <u>80.60</u>	<u>0.10</u>	<u>0.60</u>	<u>1</u>	<u>7</u>
From <u>80.60</u> To <u>80.70</u>	<u>0.10</u>	<u>0.70</u>	<u>1</u>	<u>8</u>
From <u>80.70</u> To <u>80.80</u>	<u>0.10</u>	<u>0.80</u>	<u>1</u>	<u>9</u>
From <u>80.80</u> To <u>80.90</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>11</u>
From <u>80.90</u> To <u>81.00</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>14</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.4 PERCENT RECOVERY 93

TOTAL BLOWS (after seating) 14 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.5' (79.5-80.0')

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSITED
8				

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSITED
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSITED
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 82.00	TO: 83.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 82.00 To 82.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 82.50 To 82.70	0.20	0.20	0	0
From 82.70 To 82.80	0.10	0.30	1	1
From 82.80 To 82.90	0.10	0.40	1	2
From 82.90 To 83.00	0.10	0.50	2	4
From 83.00 To 83.10	0.10	0.60	1	5
From 83.10 To 83.20	0.10	0.70	2	7
From 83.20 To 83.30	0.10	0.80	2	9
From 83.30 To 83.40	0.10	0.90	2	11
From 83.40 To 83.50	0.10	1.00	2	13
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.3 PERCENT RECOVERY 87

TOTAL BLOWS (after seating) 13 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.7' (82.0-82.7')

STANDARD FORM NO. 64

1. NAME OF THE ORGANIZATION

2. TITLE

3. POSITION

4. ADDRESS (Street, City, State, and Zip Code)

5. PHONE NUMBER (Area Code and Number)

6. FAX NUMBER (Area Code and Number)

7. E-MAIL ADDRESS

8. BUSINESS HOURS

9. OTHER INFORMATION

STANDARD FORM NO. 64

1. NAME OF THE ORGANIZATION	2. TITLE	3. POSITION
4. ADDRESS (Street, City, State, and Zip Code)	5. PHONE NUMBER (Area Code and Number)	6. FAX NUMBER (Area Code and Number)
7. E-MAIL ADDRESS	8. BUSINESS HOURS	9. OTHER INFORMATION

STANDARD FORM NO. 64

1. NAME OF THE ORGANIZATION	2. TITLE	3. POSITION
4. ADDRESS (Street, City, State, and Zip Code)	5. PHONE NUMBER (Area Code and Number)	6. FAX NUMBER (Area Code and Number)
7. E-MAIL ADDRESS	8. BUSINESS HOURS	9. OTHER INFORMATION

10. SIGNATURE OF THE ORGANIZATION

11. DATE

12. SIGNATURE OF THE INDIVIDUAL

13. DATE

14. NAME OF THE ORGANIZATION	15. TITLE	16. POSITION
17. ADDRESS (Street, City, State, and Zip Code)	18. PHONE NUMBER (Area Code and Number)	19. FAX NUMBER (Area Code and Number)
20. E-MAIL ADDRESS	21. BUSINESS HOURS	22. OTHER INFORMATION

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>84.50</u>	TO: <u>86.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>84.50</u> To <u>85.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>85.00</u> To <u>85.10</u>	<u>0.10</u>	<u>0.10</u>	<u>1</u>	<u>1</u>
From <u>85.10</u> To <u>85.20</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>2</u>
From <u>85.20</u> To <u>85.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>3</u>
From <u>85.30</u> To <u>85.40</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>4</u>
From <u>85.40</u> To <u>85.50</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>6</u>
From <u>85.50</u> To <u>85.60</u>	<u>0.10</u>	<u>0.60</u>	<u>2</u>	<u>8</u>
From <u>85.60</u> To <u>85.70</u>	<u>0.10</u>	<u>0.70</u>	<u>2</u>	<u>10</u>
From <u>85.70</u> To <u>85.80</u>	<u>0.10</u>	<u>0.80</u>	<u>2</u>	<u>12</u>
From <u>85.80</u> To <u>85.90</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>14</u>
From <u>85.90</u> To <u>86.00</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>17</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL
PENETRATION

1.50

TOTAL
RECOVERY

PERCENT
RECOVERY 1.5

100

TOTAL BLOWS (after seating)

17

EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.5' (84.5-85.0')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>87.00</u>	TO: <u>88.50</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>87.00</u> To <u>87.50</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>87.50</u> To <u>87.80</u>	<u>0.30</u>	<u>0.30</u>	<u>0</u>	<u>0</u>
From <u>87.80</u> To <u>87.90</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>1</u>
From <u>87.90</u> To <u>88.00</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>3</u>
From <u>88.00</u> To <u>88.10</u>	<u>0.10</u>	<u>0.60</u>	<u>1</u>	<u>4</u>
From <u>88.10</u> To <u>88.20</u>	<u>0.10</u>	<u>0.70</u>	<u>2</u>	<u>6</u>
From <u>88.20</u> To <u>88.30</u>	<u>0.10</u>	<u>0.80</u>	<u>1</u>	<u>7</u>
From <u>88.30</u> To <u>88.40</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>9</u>
From <u>88.40</u> To <u>88.50</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>12</u>
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 12 EXTRAPOLATED VAL. =

Description and
classification of
material.

Weight of drill rods pushed sampler 0.8' (87.0-87.8')

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 89.50	TO: 91.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 89.50 To 90.00	0.50	0.50	0	0
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 90.00 To 90.40	0.40	0.40	0	0
From 90.40 To 90.50	0.10	0.50	2	2
From 90.50 To 90.60	0.10	0.60	1	3
From 90.60 To 90.70	0.10	0.70	2	5
From 90.70 To 90.80	0.10	0.80	1	6
From 90.80 To 90.90	0.10	0.90	2	8
From 90.90 To 91.00	0.10	1.00	3	11
From To				
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 11 EXTRAPOLATED VAL. = _____

Description and classification of material.

Weight of drill rods pushed sampler 0.9' (89.5-90.4')

UNITED STATES

IN SENATE,
January 1, 1901.
REPORT
OF THE
COMMISSIONER OF THE GENERAL LAND OFFICE,
IN RESPONSE TO A RESOLUTION PASSED BY THE SENATE
MAY 1, 1899.
WASHINGTON:
GOVERNMENT PRINTING OFFICE:
1901.

NAME OF LAND	ACRES	SECTION	TOWNSHIP	RANGE	COUNTY	STATE
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NAME OF LAND	ACRES	SECTION	TOWNSHIP	RANGE	COUNTY	STATE
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SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 92.00	TO: 93.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 92.00 To 92.50	0.50	0.50	0	0
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 92.50 To 92.80	0.30	0.30	0	0
From 92.80 To 92.90	0.10	0.40	2	2
From 92.90 To 93.00	0.10	0.50	1	3
From 93.00 To 93.10	0.10	0.60	2	5
From 93.10 To 93.20	0.10	0.70	1	6
From 93.20 To 93.30	0.10	0.80	2	8
From 93.30 To 93.40	0.10	0.90	2	10
From 93.40 To 93.50	0.10	1.00	2	12
From To				
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 12 EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.8' (92.0-92.8')

Date (mm/dd/yyyy)	Time (hh:mm)	Location	Activity	Remarks

Date (mm/dd/yyyy)	Time (hh:mm)	Location	Activity	Remarks

Date (mm/dd/yyyy)	Time (hh:mm)	Location	Activity	Remarks

SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: <u>94.50</u>	TO: <u>96.00</u>
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From <u>94.50</u> To <u>95.00</u>	<u>0.50</u>	<u>0.50</u>	<u>0</u>	<u>0</u>
From _____ To _____				
From _____ To _____				
From _____ To _____				
From _____ To _____				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From <u>95.00</u> To <u>95.10</u>	<u>0.10</u>	<u>0.10</u>	<u>1</u>	<u>1</u>
From <u>95.10</u> To <u>95.20</u>	<u>0.10</u>	<u>0.20</u>	<u>1</u>	<u>2</u>
From <u>95.20</u> To <u>95.30</u>	<u>0.10</u>	<u>0.30</u>	<u>1</u>	<u>3</u>
From <u>95.30</u> To <u>95.40</u>	<u>0.10</u>	<u>0.40</u>	<u>1</u>	<u>4</u>
From <u>95.40</u> To <u>95.50</u>	<u>0.10</u>	<u>0.50</u>	<u>2</u>	<u>6</u>
From <u>95.50</u> To <u>95.60</u>	<u>0.10</u>	<u>0.60</u>	<u>1</u>	<u>7</u>
From <u>95.60</u> To <u>95.70</u>	<u>0.10</u>	<u>0.70</u>	<u>2</u>	<u>9</u>
From <u>95.70</u> To <u>95.80</u>	<u>0.10</u>	<u>0.80</u>	<u>1</u>	<u>10</u>
From <u>95.80</u> To <u>95.90</u>	<u>0.10</u>	<u>0.90</u>	<u>2</u>	<u>12</u>
From <u>95.90</u> To <u>96.00</u>	<u>0.10</u>	<u>1.00</u>	<u>3</u>	<u>15</u>

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.5 PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 15 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

Weight of drill rods pushed sampler 0.5' (94.5-95.0')

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SPT DATA SHEET

HOLE NO. PR97-204

DATE

05/18/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH

FROM: 97.00

TO: 98.50

SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 97.00 To 97.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 97.50 To 97.70	0.20	0.20	0	0
From 97.70 To 97.80	0.10	0.30	1	1
From 97.80 To 97.90	0.10	0.40	1	2
From 97.90 To 98.00	0.10	0.50	1	3
From 98.00 To 98.10	0.10	0.60	1	4
From 98.10 To 98.20	0.10	0.70	1	5
From 98.20 To 98.30	0.10	0.80	1	6
From 98.30 To 98.40	0.10	0.90	1	7
From 98.40 To 98.50	0.10	1.00	1	8
From To				

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY

87

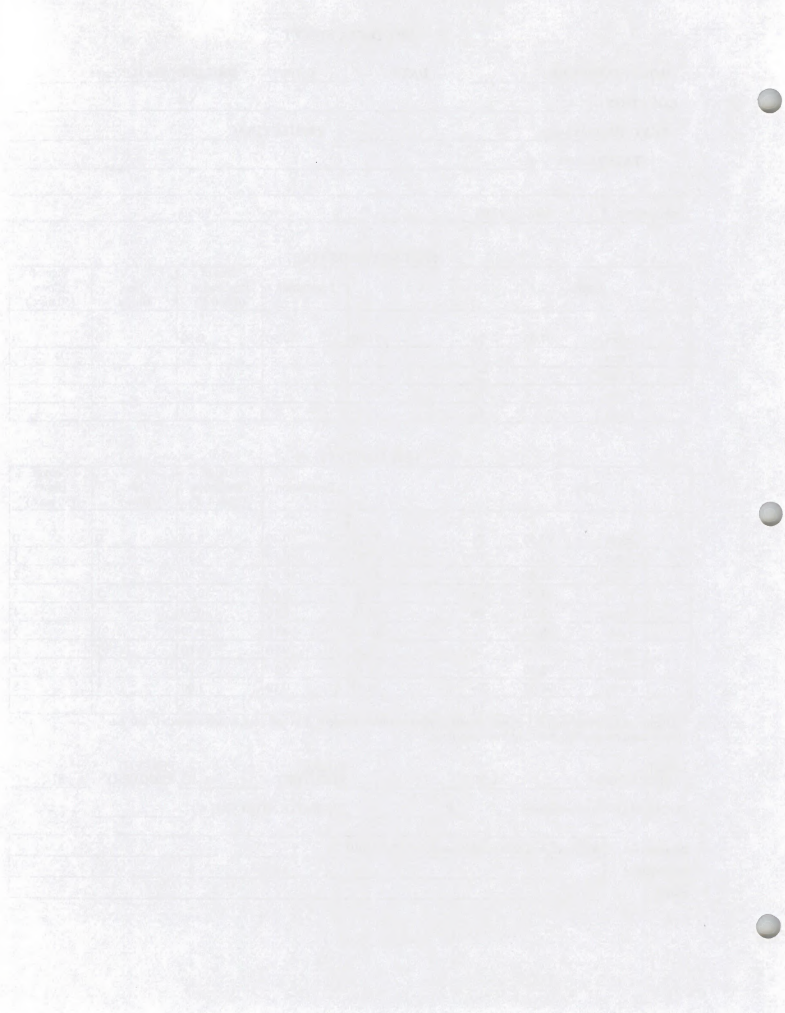
TOTAL BLOWS (after seating)

8

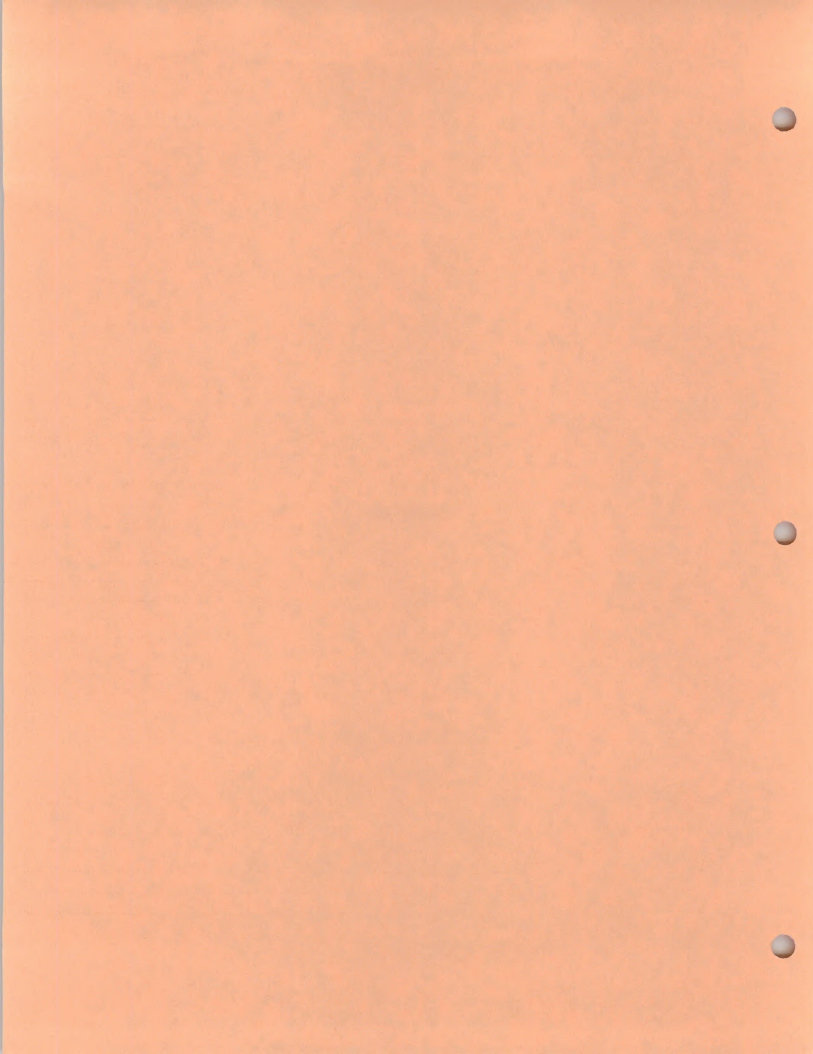
EXTRAPOLATED VAL. =

Description and classification of material.

Weight of drill rods pushed sampler 0.7' (97.0-97.7')



PR97-205



SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 4.50	TO: 6.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 4.50 To 4.60	0.10	0.10	1	1
From 4.60 To 4.70	0.10	0.20	1	2
From 4.70 To 4.80	0.10	0.30	2	4
From 4.80 To 4.90	0.10	0.40	1	5
From 4.90 To 5.00	0.10	0.50	1	6

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 5.00 To 5.10	0.10	0.10	1	1
From 5.10 To 5.20	0.10	0.20	1	2
From 5.20 To 5.30	0.10	0.30	1	3
From 5.30 To 5.40	0.10	0.40	1	4
From 5.40 To 5.50	0.10	0.50	1	5
From 5.50 To 5.60	0.10	0.60	1	6
From 5.60 To 5.70	0.10	0.70	2	8
From 5.70 To 5.80	0.10	0.80	1	9
From 5.80 To 5.90	0.10	0.90	2	11
From 5.90 To 6.00	0.10	1.00	2	13

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.8 PERCENT RECOVERY 53

TOTAL BLOWS (after seating) 13 EXTRAPOLATED VAL. =

Description and classification of material.

UNITED STATES

DEPARTMENT OF THE ARMY, WASHINGTON, D. C. 20315

FORM NO. 10-64 (REV. 1-64) PREVIOUS EDITIONS ARE OBSOLETE

1. NAME (Last, first, middle initial) _____

2. GRADE OR RATE _____

3. ORGANIZATION _____

4. ADDRESS _____

5. CITY, STATE, AND ZIP CODE _____

6. TELEPHONE NUMBER _____

7. DATE OF BIRTH _____

8. SOCIAL SECURITY NUMBER _____

9. GRADE OR RATE _____

10. ORGANIZATION _____

11. ADDRESS _____

12. CITY, STATE, AND ZIP CODE _____

13. TELEPHONE NUMBER _____

14. DATE OF BIRTH _____

15. SOCIAL SECURITY NUMBER _____

16. GRADE OR RATE _____

17. ORGANIZATION _____

18. ADDRESS _____

19. CITY, STATE, AND ZIP CODE _____

20. TELEPHONE NUMBER _____

21. DATE OF BIRTH _____

22. SOCIAL SECURITY NUMBER _____

23. GRADE OR RATE _____

24. ORGANIZATION _____

25. ADDRESS _____

26. CITY, STATE, AND ZIP CODE _____

27. TELEPHONE NUMBER _____

28. DATE OF BIRTH _____

29. SOCIAL SECURITY NUMBER _____

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 9.50	TO: 11.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 9.50 To 9.60	0.10	0.10	1	1
From 9.60 To 9.70	0.10	0.20	1	2
From 9.70 To 9.80	0.10	0.30	1	3
From 9.80 To 9.90	0.10	0.40	1	4
From 9.90 To 10.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 10.00 To 10.10	0.10	0.10	1	1
From 10.10 To 10.20	0.10	0.20	2	3
From 10.20 To 10.30	0.10	0.30	1	4
From 10.30 To 10.40	0.10	0.40	2	6
From 10.40 To 10.50	0.10	0.50	1	7
From 10.50 To 10.60	0.10	0.60	2	9
From 10.60 To 10.70	0.10	0.70	2	11
From 10.70 To 10.80	0.10	0.80	1	12
From 10.80 To 10.90	0.10	0.90	3	15
From 10.90 To 11.00	0.10	1.00	2	17

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY 1.0

67

TOTAL BLOWS (after seating)

17

EXTRAPOLATED VAL. =

Description and classification of material.

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSITED
1/1/19	1/1/19	100.00	100	100.00
2/1/19	2/1/19	100.00	101	100.00
3/1/19	3/1/19	100.00	102	100.00
4/1/19	4/1/19	100.00	103	100.00
5/1/19	5/1/19	100.00	104	100.00
6/1/19	6/1/19	100.00	105	100.00
7/1/19	7/1/19	100.00	106	100.00
8/1/19	8/1/19	100.00	107	100.00
9/1/19	9/1/19	100.00	108	100.00
10/1/19	10/1/19	100.00	109	100.00
11/1/19	11/1/19	100.00	110	100.00
12/1/19	12/1/19	100.00	111	100.00
1/1/20	1/1/20	100.00	112	100.00
2/1/20	2/1/20	100.00	113	100.00
3/1/20	3/1/20	100.00	114	100.00
4/1/20	4/1/20	100.00	115	100.00
5/1/20	5/1/20	100.00	116	100.00
6/1/20	6/1/20	100.00	117	100.00
7/1/20	7/1/20	100.00	118	100.00
8/1/20	8/1/20	100.00	119	100.00
9/1/20	9/1/20	100.00	120	100.00
10/1/20	10/1/20	100.00	121	100.00
11/1/20	11/1/20	100.00	122	100.00
12/1/20	12/1/20	100.00	123	100.00
1/1/21	1/1/21	100.00	124	100.00
2/1/21	2/1/21	100.00	125	100.00
3/1/21	3/1/21	100.00	126	100.00
4/1/21	4/1/21	100.00	127	100.00
5/1/21	5/1/21	100.00	128	100.00
6/1/21	6/1/21	100.00	129	100.00
7/1/21	7/1/21	100.00	130	100.00
8/1/21	8/1/21	100.00	131	100.00
9/1/21	9/1/21	100.00	132	100.00
10/1/21	10/1/21	100.00	133	100.00
11/1/21	11/1/21	100.00	134	100.00
12/1/21	12/1/21	100.00	135	100.00
1/1/22	1/1/22	100.00	136	100.00
2/1/22	2/1/22	100.00	137	100.00
3/1/22	3/1/22	100.00	138	100.00
4/1/22	4/1/22	100.00	139	100.00
5/1/22	5/1/22	100.00	140	100.00
6/1/22	6/1/22	100.00	141	100.00
7/1/22	7/1/22	100.00	142	100.00
8/1/22	8/1/22	100.00	143	100.00
9/1/22	9/1/22	100.00	144	100.00
10/1/22	10/1/22	100.00	145	100.00
11/1/22	11/1/22	100.00	146	100.00
12/1/22	12/1/22	100.00	147	100.00
1/1/23	1/1/23	100.00	148	100.00
2/1/23	2/1/23	100.00	149	100.00
3/1/23	3/1/23	100.00	150	100.00
4/1/23	4/1/23	100.00	151	100.00
5/1/23	5/1/23	100.00	152	100.00
6/1/23	6/1/23	100.00	153	100.00
7/1/23	7/1/23	100.00	154	100.00
8/1/23	8/1/23	100.00	155	100.00
9/1/23	9/1/23	100.00	156	100.00
10/1/23	10/1/23	100.00	157	100.00
11/1/23	11/1/23	100.00	158	100.00
12/1/23	12/1/23	100.00	159	100.00
1/1/24	1/1/24	100.00	160	100.00
2/1/24	2/1/24	100.00	161	100.00
3/1/24	3/1/24	100.00	162	100.00
4/1/24	4/1/24	100.00	163	100.00
5/1/24	5/1/24	100.00	164	100.00
6/1/24	6/1/24	100.00	165	100.00
7/1/24	7/1/24	100.00	166	100.00
8/1/24	8/1/24	100.00	167	100.00
9/1/24	9/1/24	100.00	168	100.00
10/1/24	10/1/24	100.00	169	100.00
11/1/24	11/1/24	100.00	170	100.00
12/1/24	12/1/24	100.00	171	100.00
1/1/25	1/1/25	100.00	172	100.00
2/1/25	2/1/25	100.00	173	100.00
3/1/25	3/1/25	100.00	174	100.00
4/1/25	4/1/25	100.00	175	100.00
5/1/25	5/1/25	100.00	176	100.00
6/1/25	6/1/25	100.00	177	100.00
7/1/25	7/1/25	100.00	178	100.00
8/1/25	8/1/25	100.00	179	100.00
9/1/25	9/1/25	100.00	180	100.00
10/1/25	10/1/25	100.00	181	100.00
11/1/25	11/1/25	100.00	182	100.00
12/1/25	12/1/25	100.00	183	100.00
1/1/26	1/1/26	100.00	184	100.00
2/1/26	2/1/26	100.00	185	100.00
3/1/26	3/1/26	100.00	186	100.00
4/1/26	4/1/26	100.00	187	100.00
5/1/26	5/1/26	100.00	188	100.00
6/1/26	6/1/26	100.00	189	100.00
7/1/26	7/1/26	100.00	190	100.00
8/1/26	8/1/26	100.00	191	100.00
9/1/26	9/1/26	100.00	192	100.00
10/1/26	10/1/26	100.00	193	100.00
11/1/26	11/1/26	100.00	194	100.00
12/1/26	12/1/26	100.00	195	100.00
1/1/27	1/1/27	100.00	196	100.00
2/1/27	2/1/27	100.00	197	100.00
3/1/27	3/1/27	100.00	198	100.00
4/1/27	4/1/27	100.00	199	100.00
5/1/27	5/1/27	100.00	200	100.00
6/1/27	6/1/27	100.00	201	100.00
7/1/27	7/1/27	100.00	202	100.00
8/1/27	8/1/27	100.00	203	100.00
9/1/27	9/1/27	100.00	204	100.00
10/1/27	10/1/27	100.00	205	100.00
11/1/27	11/1/27	100.00	206	100.00
12/1/27	12/1/27	100.00	207	100.00
1/1/28	1/1/28	100.00	208	100.00
2/1/28	2/1/28	100.00	209	100.00
3/1/28	3/1/28	100.00	210	100.00
4/1/28	4/1/28	100.00	211	100.00
5/1/28	5/1/28	100.00	212	100.00
6/1/28	6/1/28	100.00	213	100.00
7/1/28	7/1/28	100.00	214	100.00
8/1/28	8/1/28	100.00	215	100.00
9/1/28	9/1/28	100.00	216	100.00
10/1/28	10/1/28	100.00	217	100.00
11/1/28	11/1/28	100.00	218	100.00
12/1/28	12/1/28	100.00	219	100.00
1/1/29	1/1/29	100.00	220	100.00
2/1/29	2/1/29	100.00	221	100.00
3/1/29	3/1/29	100.00	222	100.00
4/1/29	4/1/29	100.00	223	100.00
5/1/29	5/1/29	100.00	224	100.00
6/1/29	6/1/29	100.00	225	100.00
7/1/29	7/1/29	100.00	226	100.00
8/1/29	8/1/29	100.00	227	100.00
9/1/29	9/1/29	100.00	228	100.00
10/1/29	10/1/29	100.00	229	100.00
11/1/29	11/1/29	100.00	230	100.00
12/1/29	12/1/29	100.00	231	100.00
1/1/30	1/1/30	100.00	232	100.00
2/1/30	2/1/30	100.00	233	100.00
3/1/30	3/1/30	100.00	234	100.00
4/1/30	4/1/30	100.00	235	100.00
5/1/30	5/1/30	100.00	236	100.00
6/1/30	6/1/30	100.00	237	100.00
7/1/30	7/1/30	100.00	238	100.00
8/1/30	8/1/30	100.00	239	100.00
9/1/30	9/1/30	100.00	240	100.00
10/1/30	10/1/30	100.00	241	100.00
11/1/30	11/1/30	100.00	242	100.00
12/1/30	12/1/30	100.00	243	100.00
1/1/31	1/1/31	100.00	244	100.00
2/1/31	2/1/31	100.00	245	100.00
3/1/31	3/1/31	100.00	246	100.00
4/1/31	4/1/31	100.00	247	100.00
5/1/31	5/1/31	100.00	248	100.00
6/1/31	6/1/31	100.00	249	100.00
7/1/31	7/1/31	100.00	250	100.00
8/1/31	8/1/31	100.00	251	100.00
9/1/31	9/1/31	100.00	252	100.00
10/1/31	10/1/31	100.00	253	100.00
11/1/31	11/1/31	100.00	254	100.00
12/1/31	12/1/31	100.00	255	100.00
1/1/32	1/1/32	100.00	256	100.00
2/1/32	2/1/32	100.00	257	100.00
3/1/32	3/1/32	100.00	258	100.00
4/1/32	4/1/32	100.00	259	100.00
5/1/32	5/1/32	100.00	260	100.00
6/1/32	6/1/32	100.00	261	100.00
7/1/32	7/1/32	100.00	262	100.00
8/1/32	8/1/32	100.00	263	100.00
9/1/32	9/1/32	100.00	264	100.00
10/1/32	10/1/32	100.00	265	100.00
11/1/32	11/1/32	100.00	266	100.00
12/1/32	12/1/32	100.00	267	100.00
1/1/33	1/1/33	100.00	268	100.00
2/1/33	2/1/33	100.00	269	100.00
3/1/33	3/1/33	100.00	270	100.00
4/1/33	4/1/33	100.00	271	100.00
5/1/33	5/1/33	100.00	272	100.00
6/1/33	6/1/33	100.00	273	100.00
7/1/33	7/1/33	100.00	274	100.00
8/1/33	8/1/33	100.00	275	100.00
9/1/33	9/1/33	100.00	276	100.00
10/1/33	10/1/33	100.00	277	100.00
11/1/33	11/1/33	100.00	278	100.00
12/1/33	12/1/33	100.00	279	100.00
1/1/34	1/1/34	100.00	280	100.00
2/1/34	2/1/34	100.00	281	100.00
3/1/34	3/1/34	100.00	282	100.00
4/1/34	4/1/34	100.00	283	100.00
5/1/34	5/1/34	100.00	284	100.00
6/1/34	6/1/34	100.00	285	100.00
7/1/34	7/1/34	100.00	286	100.00
8/1/34	8/1/34	100.00	287	100.00
9/1/34	9/1/34	100.00	288	100.00
10/1/34	10/1/34	100.00	289	100.00
11/1/34	11/1/34	100.00	290	100.00
12/1/34	12/1/34	100.00	291	100.00
1/1/35	1/1/35	100.00	292	100.00
2/1/35	2/1/35	100.00	293	100.00
3/1/35	3/1/35	100.00	294	100.00
4/1/35	4/1/35	100.00	295	100.00
5/1/35	5/1/35	100.00	296	100.00
6/1/35	6/1/35	100.00	297	100.00
7/1/35	7/1/35	100.00	298	100.00
8/1/35	8/1/35	100.00	299	100.00
9/1/35	9/1/35	100.00	300	100.00
10/1/35	10/1/35	100.00	301	100.00
11/1/35	11/1/35	100.00	302	100.00
12/1/35	12/1/35	100.00	303	100.00
1/1/36	1/1/36	100.00	304	100.00
2/1/36	2/1/36	100.00	305	100.00
3/1/36	3/1/36	100.00	306	100.00
4/1/36	4/1/36	100.00	307	100.00
5/1/36	5/1/36	100.00	308	100.00
6/1/36	6/1/36	100.00	309	100.00
7/1/36	7/1/36	100.00		

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 14.50	TO: 16.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 14.50 To 14.60	0.10	0.10	1	1
From 14.60 To 14.70	0.10	0.20	1	2
From 14.70 To 14.80	0.10	0.30	1	3
From 14.80 To 14.90	0.10	0.40	1	4
From 14.90 To 15.00	0.10	0.50	1	5

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 15.00 To 15.10	0.10	0.10	1	1
From 15.10 To 15.20	0.10	0.20	1	2
From 15.20 To 15.30	0.10	0.30	2	4
From 15.30 To 15.40	0.10	0.40	2	6
From 15.40 To 15.50	0.10	0.50	2	8
From 15.50 To 15.60	0.10	0.60	1	9
From 15.60 To 15.70	0.10	0.70	2	11
From 15.70 To 15.80	0.10	0.80	2	13
From 15.80 To 15.90	0.10	0.90	3	16
From 15.90 To 16.00	0.10	1.00	3	19

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION

1.50

TOTAL RECOVERY

PERCENT RECOVERY

67

TOTAL BLOWS (after seating)

19

EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 19.50	TO: 21.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 19.50 To 19.60	0.10	0.10	1	1
From 19.60 To 19.70	0.10	0.20	1	2
From 19.70 To 19.80	0.10	0.30	2	4
From 19.80 To 19.90	0.10	0.40	2	6
From 19.90 To 20.00	0.10	0.50	4	10

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 20.00 To 20.10	0.10	0.10	3	3
From 20.10 To 20.20	0.10	0.20	2	5
From 20.20 To 20.30	0.10	0.30	4	9
From 20.30 To 20.40	0.10	0.40	3	12
From 20.40 To 20.50	0.10	0.50	3	15
From 20.50 To 20.60	0.10	0.60	3	18
From 20.60 To 20.70	0.10	0.70	3	21
From 20.70 To 20.80	0.10	0.80	3	24
From 20.80 To 20.90	0.10	0.90	5	29
From 20.90 To 21.00	0.10	1.00	5	34

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.6 PERCENT RECOVERY 40

TOTAL BLOWS (after seating) 34 EXTRAPOLATED VAL. =

Description and classification of material.

UNITED STATES

IN SENATE, January 10, 1906.

REPORT
OF THE
COMMISSIONER OF THE GENERAL LAND OFFICE
FOR THE YEAR 1905.

STATE.	ACRES.	AMOUNT OF LAND OFFERED FOR SALE.	AMOUNT OF LAND SOLD.	AMOUNT OF LAND REDEEMED.	AMOUNT OF LAND REDEEMED.
Alabama	1,234,567	123,456	12,345	1,234	123
Arizona	2,345,678	234,567	23,456	2,345	234
Arkansas	3,456,789	345,678	34,567	3,456	345
California	4,567,890	456,789	45,678	4,567	456
Colorado	5,678,901	567,890	56,789	5,678	567
Connecticut	6,789,012	678,901	67,890	6,789	678
Delaware	7,890,123	789,012	78,901	7,890	789
Florida	8,901,234	890,123	89,012	8,901	890
Georgia	9,012,345	901,234	90,123	9,012	901
Idaho	10,123,456	1,012,345	101,234	10,123	1,012
Illinois	11,234,567	1,123,456	112,345	11,234	1,123
Indiana	12,345,678	1,234,567	123,456	12,345	1,234
Iowa	13,456,789	1,345,678	134,567	13,456	1,345
Kansas	14,567,890	1,456,789	145,678	14,567	1,456
Kentucky	15,678,901	1,567,890	156,789	15,678	1,567
Louisiana	16,789,012	1,678,901	167,890	16,789	1,678
Maine	17,890,123	1,789,012	178,901	17,890	1,789
Maryland	18,901,234	1,890,123	189,012	18,901	1,890
Massachusetts	19,012,345	1,901,234	190,123	19,012	1,901
Michigan	20,123,456	2,012,345	201,234	20,123	2,012
Minnesota	21,234,567	2,123,456	212,345	21,234	2,123
Mississippi	22,345,678	2,234,567	223,456	22,345	2,234
Missouri	23,456,789	2,345,678	234,567	23,456	2,345
Montana	24,567,890	2,456,789	245,678	24,567	2,456
Nebraska	25,678,901	2,567,890	256,789	25,678	2,567
Nevada	26,789,012	2,678,901	267,890	26,789	2,678
New Hampshire	27,890,123	2,789,012	278,901	27,890	2,789
New Jersey	28,901,234	2,890,123	289,012	28,901	2,890
New Mexico	29,012,345	2,901,234	290,123	29,012	2,901
New York	30,123,456	3,012,345	301,234	30,123	3,012
North Carolina	31,234,567	3,123,456	312,345	31,234	3,123
North Dakota	32,345,678	3,234,567	323,456	32,345	3,234
Ohio	33,456,789	3,345,678	334,567	33,456	3,345
Oklahoma	34,567,890	3,456,789	345,678	34,567	3,456
Oregon	35,678,901	3,567,890	356,789	35,678	3,567
Pennsylvania	36,789,012	3,678,901	367,890	36,789	3,678
Rhode Island	37,890,123	3,789,012	378,901	37,890	3,789
South Carolina	38,901,234	3,890,123	389,012	38,901	3,890
South Dakota	39,012,345	3,901,234	390,123	39,012	3,901
Tennessee	40,123,456	4,012,345	401,234	40,123	4,012
Texas	41,234,567	4,123,456	412,345	41,234	4,123
Vermont	42,345,678	4,234,567	423,456	42,345	4,234
Virginia	43,456,789	4,345,678	434,567	43,456	4,345
Washington	44,567,890	4,456,789	445,678	44,567	4,456
West Virginia	45,678,901	4,567,890	456,789	45,678	4,567
Wisconsin	46,789,012	4,678,901	467,890	46,789	4,678
Wyoming	47,890,123	4,789,012	478,901	47,890	4,789

STATE.	ACRES.	AMOUNT OF LAND OFFERED FOR SALE.	AMOUNT OF LAND SOLD.	AMOUNT OF LAND REDEEMED.	AMOUNT OF LAND REDEEMED.
Montana	48,901,234	4,890,123	489,012	48,901	4,890
Nebraska	49,012,345	4,901,234	490,123	49,012	4,901
Nevada	50,123,456	5,012,345	501,234	50,123	5,012
New Mexico	51,234,567	5,123,456	512,345	51,234	5,123
North Carolina	52,345,678	5,234,567	523,456	52,345	5,234
North Dakota	53,456,789	5,345,678	534,567	53,456	5,345
Ohio	54,567,890	5,456,789	545,678	54,567	5,456
Oklahoma	55,678,901	5,567,890	556,789	55,678	5,567
Oregon	56,789,012	5,678,901	567,890	56,789	5,678
Pennsylvania	57,890,123	5,789,012	578,901	57,890	5,789
Rhode Island	58,901,234	5,890,123	589,012	58,901	5,890
South Carolina	59,012,345	5,901,234	590,123	59,012	5,901
South Dakota	60,123,456	6,012,345	601,234	60,123	6,012
Tennessee	61,234,567	6,123,456	612,345	61,234	6,123
Texas	62,345,678	6,234,567	623,456	62,345	6,234
Vermont	63,456,789	6,345,678	634,567	63,456	6,345
Virginia	64,567,890	6,456,789	645,678	64,567	6,456
Washington	65,678,901	6,567,890	656,789	65,678	6,567
West Virginia	66,789,012	6,678,901	667,890	66,789	6,678
Wisconsin	67,890,123	6,789,012	678,901	67,890	6,789
Wyoming	68,901,234	6,890,123	689,012	68,901	6,890

STATE.	ACRES.	AMOUNT OF LAND OFFERED FOR SALE.	AMOUNT OF LAND SOLD.	AMOUNT OF LAND REDEEMED.	AMOUNT OF LAND REDEEMED.
Idaho	69,012,345	6,901,234	690,123	69,012	6,901
Illinois	70,123,456	7,012,345	701,234	70,123	7,012
Indiana	71,234,567	7,123,456	712,345	71,234	7,123
Iowa	72,345,678	7,234,567	723,456	72,345	7,234
Kansas	73,456,789	7,345,678	734,567	73,456	7,345
Kentucky	74,567,890	7,456,789	745,678	74,567	7,456
Louisiana	75,678,901	7,567,890	756,789	75,678	7,567
Maine	76,789,012	7,678,901	767,890	76,789	7,678
Maryland	77,890,123	7,789,012	778,901	77,890	7,789
Massachusetts	78,901,234	7,890,123	789,012	78,901	7,890
Michigan	79,012,345	7,901,234	790,123	79,012	7,901
Minnesota	80,123,456	8,012,345	801,234	80,123	8,012
Mississippi	81,234,567	8,123,456	812,345	81,234	8,123
Missouri	82,345,678	8,234,567	823,456	82,345	8,234
Montana	83,456,789	8,345,678	834,567	83,456	8,345
Nebraska	84,567,890	8,456,789	845,678	84,567	8,456
Nevada	85,678,901	8,567,890	856,789	85,678	8,567
New Mexico	86,789,012	8,678,901	867,890	86,789	8,678
North Carolina	87,890,123	8,789,012	878,901	87,890	8,789
North Dakota	88,901,234	8,890,123	889,012	88,901	8,890
Ohio	89,012,345	8,901,234	890,123	89,012	8,901
Oklahoma	90,123,456	9,012,345	901,234	90,123	9,012
Oregon	91,234,567	9,123,456	912,345	91,234	9,123
Pennsylvania	92,345,678	9,234,567	923,456	92,345	9,234
Rhode Island	93,456,789	9,345,678	934,567	93,456	9,345
South Carolina	94,567,890	9,456,789	945,678	94,567	9,456
South Dakota	95,678,901	9,567,890	956,789	95,678	9,567
Tennessee	96,789,012	9,678,901	967,890	96,789	9,678
Texas	97,890,123	9,789,012	978,901	97,890	9,789
Vermont	98,901,234	9,890,123	989,012	98,901	9,890
Virginia	99,012,345	9,901,234	990,123	99,012	9,901
Washington	100,123,456	10,012,345	1,001,234	100,123	10,012
West Virginia	101,234,567	10,123,456	1,012,345	101,234	10,123
Wisconsin	102,345,678	10,234,567	1,023,456	102,345	10,234
Wyoming	103,456,789	10,345,678	1,034,567	103,456	10,345

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 22.00	TO: 23.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 22.00 To 22.10	0.10	0.10	1	1
From 22.10 To 22.20	0.10	0.20	1	2
From 22.20 To 22.30	0.10	0.30	2	4
From 22.30 To 22.40	0.10	0.40	2	6
From 22.40 To 22.50	0.10	0.50	3	9

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 22.50 To 22.60	0.10	0.10	2	2
From 22.60 To 22.70	0.10	0.20	3	5
From 22.70 To 22.80	0.10	0.30	2	7
From 22.80 To 22.90	0.10	0.40	3	10
From 22.90 To 23.00	0.10	0.50	3	13
From 23.00 To 23.10	0.10	0.60	2	15
From 23.10 To 23.20	0.10	0.70	4	19
From 23.20 To 23.30	0.10	0.80	2	21
From 23.30 To 23.40	0.10	0.90	4	25
From 23.40 To 23.50	0.10	1.00	4	29

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 0.8 PERCENT RECOVERY 53

TOTAL BLOWS (after seating) 29 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 24.50	TO: 26.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 24.50 To 24.60	0.10	0.10	1	1
From 24.60 To 24.70	0.10	0.20	1	2
From 24.70 To 24.80	0.10	0.30	2	4
From 24.80 To 24.90	0.10	0.40	3	7
From 24.90 To 25.00	0.10	0.50	2	9

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 25.00 To 25.10	0.10	0.10	2	2
From 25.10 To 25.20	0.10	0.20	3	5
From 25.20 To 25.30	0.10	0.30	2	7
From 25.30 To 25.40	0.10	0.40	4	11
From 25.40 To 25.50	0.10	0.50	2	13
From 25.50 To 25.60	0.10	0.60	3	16
From 25.60 To 25.70	0.10	0.70	3	19
From 25.70 To 25.80	0.10	0.80	3	22
From 25.80 To 25.90	0.10	0.90	4	26
From 25.90 To 26.00	0.10	1.00	4	30

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	1.0	PERCENT RECOVERY	67
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TOTAL BLOWS (after seating) 30 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSITED
12-1-78	100.00			
12-2-78	100.00			
12-3-78	100.00			
12-4-78	100.00			
12-5-78	100.00			
12-6-78	100.00			
12-7-78	100.00			
12-8-78	100.00			
12-9-78	100.00			
12-10-78	100.00			
12-11-78	100.00			
12-12-78	100.00			
12-13-78	100.00			
12-14-78	100.00			
12-15-78	100.00			
12-16-78	100.00			
12-17-78	100.00			
12-18-78	100.00			
12-19-78	100.00			
12-20-78	100.00			
12-21-78	100.00			
12-22-78	100.00			
12-23-78	100.00			
12-24-78	100.00			
12-25-78	100.00			
12-26-78	100.00			
12-27-78	100.00			
12-28-78	100.00			
12-29-78	100.00			
12-30-78	100.00			
12-31-78	100.00			

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSITED
1-1-79	100.00			
1-2-79	100.00			
1-3-79	100.00			
1-4-79	100.00			
1-5-79	100.00			
1-6-79	100.00			
1-7-79	100.00			
1-8-79	100.00			
1-9-79	100.00			
1-10-79	100.00			
1-11-79	100.00			
1-12-79	100.00			
1-13-79	100.00			
1-14-79	100.00			
1-15-79	100.00			
1-16-79	100.00			
1-17-79	100.00			
1-18-79	100.00			
1-19-79	100.00			
1-20-79	100.00			
1-21-79	100.00			
1-22-79	100.00			
1-23-79	100.00			
1-24-79	100.00			
1-25-79	100.00			
1-26-79	100.00			
1-27-79	100.00			
1-28-79	100.00			
1-29-79	100.00			
1-30-79	100.00			
1-31-79	100.00			

DATE	DESCRIPTION	AMOUNT	CHECK NO.	DEPOSITED
2-1-79	100.00			
2-2-79	100.00			
2-3-79	100.00			
2-4-79	100.00			
2-5-79	100.00			
2-6-79	100.00			
2-7-79	100.00			
2-8-79	100.00			
2-9-79	100.00			
2-10-79	100.00			
2-11-79	100.00			
2-12-79	100.00			
2-13-79	100.00			
2-14-79	100.00			
2-15-79	100.00			
2-16-79	100.00			
2-17-79	100.00			
2-18-79	100.00			
2-19-79	100.00			
2-20-79	100.00			
2-21-79	100.00			
2-22-79	100.00			
2-23-79	100.00			
2-24-79	100.00			
2-25-79	100.00			
2-26-79	100.00			
2-27-79	100.00			
2-28-79	100.00			
2-29-79	100.00			
2-30-79	100.00			
2-31-79	100.00			

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 27.00	TO: 28.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 27.00 To 27.10	0.10	0.10	1	1
From 27.10 To 27.20	0.10	0.20	1	2
From 27.20 To 27.30	0.10	0.30	2	4
From 27.30 To 27.40	0.10	0.40	2	6
From 27.40 To 27.50	0.10	0.50	2	8

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 27.50 To 27.60	0.10	0.10	2	2
From 27.60 To 27.70	0.10	0.20	2	4
From 27.70 To 27.80	0.10	0.30	2	6
From 27.80 To 27.90	0.10	0.40	3	9
From 27.90 To 28.00	0.10	0.50	2	11
From 28.00 To 28.10	0.10	0.60	3	14
From 28.10 To 28.20	0.10	0.70	2	16
From 28.20 To 28.30	0.10	0.80	3	19
From 28.30 To 28.40	0.10	0.90	3	22
From 28.40 To 28.50	0.10	1.00	3	25

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 73

TOTAL BLOWS (after seating) 25 EXTRAPOLATED VAL. =

Description and classification of material.

Year	Month	Day	Time	Location	Remarks
1990	1	1	10:00	1000	1000
1990	1	2	10:00	1000	1000
1990	1	3	10:00	1000	1000
1990	1	4	10:00	1000	1000
1990	1	5	10:00	1000	1000
1990	1	6	10:00	1000	1000
1990	1	7	10:00	1000	1000
1990	1	8	10:00	1000	1000
1990	1	9	10:00	1000	1000
1990	1	10	10:00	1000	1000
1990	1	11	10:00	1000	1000
1990	1	12	10:00	1000	1000
1990	1	13	10:00	1000	1000
1990	1	14	10:00	1000	1000
1990	1	15	10:00	1000	1000
1990	1	16	10:00	1000	1000
1990	1	17	10:00	1000	1000
1990	1	18	10:00	1000	1000
1990	1	19	10:00	1000	1000
1990	1	20	10:00	1000	1000
1990	1	21	10:00	1000	1000
1990	1	22	10:00	1000	1000
1990	1	23	10:00	1000	1000
1990	1	24	10:00	1000	1000
1990	1	25	10:00	1000	1000
1990	1	26	10:00	1000	1000
1990	1	27	10:00	1000	1000
1990	1	28	10:00	1000	1000
1990	1	29	10:00	1000	1000
1990	1	30	10:00	1000	1000
1990	1	31	10:00	1000	1000

Year	Month	Day	Time	Location	Remarks
1990	2	1	10:00	1000	1000
1990	2	2	10:00	1000	1000
1990	2	3	10:00	1000	1000
1990	2	4	10:00	1000	1000
1990	2	5	10:00	1000	1000
1990	2	6	10:00	1000	1000
1990	2	7	10:00	1000	1000
1990	2	8	10:00	1000	1000
1990	2	9	10:00	1000	1000
1990	2	10	10:00	1000	1000
1990	2	11	10:00	1000	1000
1990	2	12	10:00	1000	1000
1990	2	13	10:00	1000	1000
1990	2	14	10:00	1000	1000
1990	2	15	10:00	1000	1000
1990	2	16	10:00	1000	1000
1990	2	17	10:00	1000	1000
1990	2	18	10:00	1000	1000
1990	2	19	10:00	1000	1000
1990	2	20	10:00	1000	1000
1990	2	21	10:00	1000	1000
1990	2	22	10:00	1000	1000
1990	2	23	10:00	1000	1000
1990	2	24	10:00	1000	1000
1990	2	25	10:00	1000	1000
1990	2	26	10:00	1000	1000
1990	2	27	10:00	1000	1000
1990	2	28	10:00	1000	1000
1990	2	29	10:00	1000	1000
1990	2	30	10:00	1000	1000

Year	Month	Day	Time	Location	Remarks
1990	3	1	10:00	1000	1000
1990	3	2	10:00	1000	1000
1990	3	3	10:00	1000	1000
1990	3	4	10:00	1000	1000
1990	3	5	10:00	1000	1000
1990	3	6	10:00	1000	1000
1990	3	7	10:00	1000	1000
1990	3	8	10:00	1000	1000
1990	3	9	10:00	1000	1000
1990	3	10	10:00	1000	1000
1990	3	11	10:00	1000	1000
1990	3	12	10:00	1000	1000
1990	3	13	10:00	1000	1000
1990	3	14	10:00	1000	1000
1990	3	15	10:00	1000	1000
1990	3	16	10:00	1000	1000
1990	3	17	10:00	1000	1000
1990	3	18	10:00	1000	1000
1990	3	19	10:00	1000	1000
1990	3	20	10:00	1000	1000
1990	3	21	10:00	1000	1000
1990	3	22	10:00	1000	1000
1990	3	23	10:00	1000	1000
1990	3	24	10:00	1000	1000
1990	3	25	10:00	1000	1000
1990	3	26	10:00	1000	1000
1990	3	27	10:00	1000	1000
1990	3	28	10:00	1000	1000
1990	3	29	10:00	1000	1000
1990	3	30	10:00	1000	1000
1990	3	31	10:00	1000	1000

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 29.50	TO: 31.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 29.50 To 29.60	0.10	0.10	10	10
From 29.60 To 29.70	0.10	0.20	10	20
From 29.70 To 29.80	0.10	0.30	10	30
From 29.80 To 29.90	0.10	0.40	3	33
From 29.90 To 30.00	0.10	0.50	3	36

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 30.00 To 30.10	0.10	0.10	2	2
From 30.10 To 30.20	0.10	0.20	2	4
From 30.20 To 30.30	0.10	0.30	3	7
From 30.30 To 30.40	0.10	0.40	3	10
From 30.40 To 30.50	0.10	0.50	3	13
From 30.50 To 30.60	0.10	0.60	2	15
From 30.60 To 30.70	0.10	0.70	3	18
From 30.70 To 30.80	0.10	0.80	2	20
From 30.80 To 30.90	0.10	0.90	4	24
From 30.90 To 31.00	0.10	1.00	3	27

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT RECOVERY 100

TOTAL BLOWS (after seating) 27 EXTRAPOLATED VAL. =

Description and classification of material.

Rock in front of barrel - bent

Year	Month	Day	Time	Location	Activity
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100

Year	Month	Day	Time	Location	Activity
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100
2010	01	01	08:00	0100	0100

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 32.00	TO: 33.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 32.00 To 32.30	0.30	0.30	1	1
From 32.30 To 32.40	0.10	0.40	1	2
From 32.40 To 32.50	0.10	0.50	1	3
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 32.50 To 32.60	0.10	0.10	1	1
From 32.60 To 32.70	0.10	0.20	2	3
From 32.70 To 32.80	0.10	0.30	2	5
From 32.80 To 32.90	0.10	0.40	2	7
From 32.90 To 33.00	0.10	0.50	3	10
From 33.00 To 33.10	0.10	0.60	2	12
From 33.10 To 33.20	0.10	0.70	3	15
From 33.20 To 33.30	0.10	0.80	2	17
From 33.30 To 33.40	0.10	0.90	3	20
From 33.40 To 33.50	0.10	1.00	3	23

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT 1.5 RECOVERY 100

TOTAL BLOWS (after seating) 23 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 34.50	TO: 36.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 34.50 To 34.90	0.40	0.40	1	1
From 34.90 To 35.00	0.10	0.50	1	2
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 35.00 To 35.10	0.10	0.10	1	1
From 35.10 To 35.20	0.10	0.20	1	2
From 35.20 To 35.30	0.10	0.30	2	4
From 35.30 To 35.40	0.10	0.40	2	6
From 35.40 To 35.50	0.10	0.50	2	8
From 35.50 To 35.60	0.10	0.60	2	10
From 35.60 To 35.70	0.10	0.70	3	13
From 35.70 To 35.80	0.10	0.80	3	16
From 35.80 To 35.90	0.10	0.90	3	19
From 35.90 To 36.00	0.10	1.00	3	22

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	100
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TOTAL BLOWS (after seating) 22 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 37.00	TO: 38.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 37.00 To 37.40	0.40	0.40	1	1
From 37.40 To 37.50	0.10	0.50	1	2
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 37.50 To 37.60	0.10	0.10	1	1
From 37.60 To 37.70	0.10	0.20	2	3
From 37.70 To 37.80	0.10	0.30	2	5
From 37.80 To 37.90	0.10	0.40	2	7
From 37.90 To 38.00	0.10	0.50	2	9
From 38.00 To 38.10	0.10	0.60	3	12
From 38.10 To 38.20	0.10	0.70	3	15
From 38.20 To 38.30	0.10	0.80	3	18
From 38.30 To 38.40	0.10	0.90	3	21
From 38.40 To 38.50	0.10	1.00	4	25

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	93
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TOTAL BLOWS (after seating) 25 EXTRAPOLATED VAL. =

Description and
classification of
material.

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 39.50	TO: 41.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 39.50 To 39.90	0.40	0.40	1	1
From 39.90 To 40.00	0.10	0.50	1	2
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 40.00 To 40.10	0.10	0.10	1	1
From 40.10 To 40.20	0.10	0.20	1	2
From 40.20 To 40.30	0.10	0.30	1	3
From 40.30 To 40.40	0.10	0.40	2	5
From 40.40 To 40.50	0.10	0.50	2	7
From 40.50 To 40.60	0.10	0.60	2	9
From 40.60 To 40.70	0.10	0.70	2	11
From 40.70 To 40.80	0.10	0.80	3	14
From 40.80 To 40.90	0.10	0.90	3	17
From 40.90 To 41.00	0.10	1.00	3	20

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.3 PERCENT RECOVERY 87

TOTAL BLOWS (after seating) 20 EXTRAPOLATED VAL. =

Description and classification of material.

DATE	DESCRIPTION	AMOUNT
1/1/20		
1/2/20		
1/3/20		
1/4/20		
1/5/20		
1/6/20		
1/7/20		
1/8/20		
1/9/20		
1/10/20		
1/11/20		
1/12/20		
1/13/20		
1/14/20		
1/15/20		
1/16/20		
1/17/20		
1/18/20		
1/19/20		
1/20/20		
1/21/20		
1/22/20		
1/23/20		
1/24/20		
1/25/20		
1/26/20		
1/27/20		
1/28/20		
1/29/20		
1/30/20		
1/31/20		

DATE	DESCRIPTION	AMOUNT
2/1/20		
2/2/20		
2/3/20		
2/4/20		
2/5/20		
2/6/20		
2/7/20		
2/8/20		
2/9/20		
2/10/20		
2/11/20		
2/12/20		
2/13/20		
2/14/20		
2/15/20		
2/16/20		
2/17/20		
2/18/20		
2/19/20		
2/20/20		
2/21/20		
2/22/20		
2/23/20		
2/24/20		
2/25/20		
2/26/20		
2/27/20		
2/28/20		
2/29/20		
2/30/20		
2/31/20		

DATE	DESCRIPTION	AMOUNT
3/1/20		
3/2/20		
3/3/20		
3/4/20		
3/5/20		
3/6/20		
3/7/20		
3/8/20		
3/9/20		
3/10/20		
3/11/20		
3/12/20		
3/13/20		
3/14/20		
3/15/20		
3/16/20		
3/17/20		
3/18/20		
3/19/20		
3/20/20		
3/21/20		
3/22/20		
3/23/20		
3/24/20		
3/25/20		
3/26/20		
3/27/20		
3/28/20		
3/29/20		
3/30/20		
3/31/20		

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 42.00	TO: 43.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 42.00 To 42.40	0.40	0.40	1	1
From 42.40 To 42.50	0.10	0.50	1	2
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 42.50 To 42.60	0.10	0.10	1	1
From 42.60 To 42.70	0.10	0.20	2	3
From 42.70 To 42.80	0.10	0.30	1	4
From 42.80 To 42.90	0.10	0.40	2	6
From 42.90 To 43.00	0.10	0.50	2	8
From 43.00 To 43.10	0.10	0.60	3	11
From 43.10 To 43.20	0.10	0.70	2	13
From 43.20 To 43.30	0.10	0.80	3	16
From 43.30 To 43.40	0.10	0.90	3	19
From 43.40 To 43.50	0.10	1.00	3	22

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	100
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TOTAL BLOWS (after seating) 22 EXTRAPOLATED VAL. = _____

Description and
classification of
material.

1. Name of the person or organization: _____
 2. Address: _____
 3. City: _____
 4. State: _____
 5. Zip: _____
 6. Telephone: _____
 7. Fax: _____
 8. E-mail: _____
 9. Website: _____
 10. Other: _____

11. Name of the person or organization: _____
 12. Address: _____
 13. City: _____
 14. State: _____
 15. Zip: _____
 16. Telephone: _____
 17. Fax: _____
 18. E-mail: _____
 19. Website: _____
 20. Other: _____

21. Name of the person or organization: _____
 22. Address: _____
 23. City: _____
 24. State: _____
 25. Zip: _____
 26. Telephone: _____
 27. Fax: _____
 28. E-mail: _____
 29. Website: _____
 30. Other: _____

31. Name of the person or organization: _____
 32. Address: _____
 33. City: _____
 34. State: _____
 35. Zip: _____
 36. Telephone: _____
 37. Fax: _____
 38. E-mail: _____
 39. Website: _____
 40. Other: _____

41. Name of the person or organization: _____
 42. Address: _____
 43. City: _____
 44. State: _____
 45. Zip: _____
 46. Telephone: _____
 47. Fax: _____
 48. E-mail: _____
 49. Website: _____
 50. Other: _____

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 44.50	TO: 46.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 44.50 To 45.00	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 45.00 To 45.10	0.10	0.10	1	1
From 45.10 To 45.20	0.10	0.20	1	2
From 45.20 To 45.30	0.10	0.30	1	3
From 45.30 To 45.40	0.10	0.40	3	6
From 45.40 To 45.50	0.10	0.50	1	7
From 45.50 To 45.60	0.10	0.60	1	8
From 45.60 To 45.70	0.10	0.70	1	9
From 45.70 To 45.80	0.10	0.80	1	10
From 45.80 To 45.90	0.10	0.90	3	13
From 45.90 To 46.00	0.10	1.00	3	16

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION	1.50	TOTAL RECOVERY	PERCENT RECOVERY	73
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TOTAL BLOWS (after seating) 16 EXTRAPOLATED VAL. =

Description and classification of material.

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 47.00	TO: 48.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 47.00 To 47.40	0.40	0.40	1	1
From 47.40 To 47.50	0.10	0.50	1	2
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 47.50 To 47.60	0.10	0.10	1	1
From 47.60 To 47.70	0.10	0.20	2	3
From 47.70 To 47.80	0.10	0.30	1	4
From 47.80 To 47.90	0.10	0.40	3	7
From 47.90 To 48.00	0.10	0.50	2	9
From 48.00 To 48.10	0.10	0.60	2	11
From 48.10 To 48.20	0.10	0.70	2	13
From 48.20 To 48.30	0.10	0.80	2	15
From 48.30 To 48.40	0.10	0.90	4	19
From 48.40 To 48.50	0.10	1.00	3	22

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY 1.2 PERCENT RECOVERY 80

TOTAL BLOWS (after seating) 22 EXTRAPOLATED VAL. =

Description and classification of material

SPT DATA SHEET

HOLE NO. PR97-205

DATE 05/19/97

DRILLER Mike McNamee

LOCATION _____

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 49.50	TO: 51.00
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 49.50 To 49.90	0.40	0.40	1	1
From 49.90 To 50.00	0.10	0.50	1	2
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 50.00 To 50.10	0.10	0.10	1	1
From 50.10 To 50.20	0.10	0.20	1	2
From 50.20 To 50.30	0.10	0.30	2	4
From 50.30 To 50.40	0.10	0.40	2	6
From 50.40 To 50.50	0.10	0.50	2	8
From 50.50 To 50.60	0.10	0.60	2	10
From 50.60 To 50.70	0.10	0.70	2	12
From 50.70 To 50.80	0.10	0.80	2	14
From 50.80 To 50.90	0.10	0.90	3	17
From 50.90 To 51.00	0.10	1.00	2	19

* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT 1.5 RECOVERY 100

TOTAL BLOWS (after seating) 19 EXTRAPOLATED VAL. =

Description and classification of material.

UNIT 1: THE HISTORY OF THE UNITED STATES

1. The United States was founded in 1776.

2. The first President of the United States was George Washington.

3. The United States is a democratic country.

4. The United States is a large country.

5. The United States is a powerful country.

6. The United States is a free country.

7. The United States is a country of opportunity.

8. The United States is a country of progress.

9. The United States is a country of innovation.

10. The United States is a country of hope.

11. The United States is a country of dreams.

12. The United States is a country of possibility.

13. The United States is a country of freedom.

14. The United States is a country of justice.

15. The United States is a country of peace.

16. The United States is a country of love.

17. The United States is a country of unity.

18. The United States is a country of strength.

19. The United States is a country of courage.

20. The United States is a country of faith.

21. The United States is a country of hope.

22. The United States is a country of dreams.

23. The United States is a country of possibility.

24. The United States is a country of freedom.

25. The United States is a country of justice.

26. The United States is a country of peace.

27. The United States is a country of love.

28. The United States is a country of unity.

29. The United States is a country of strength.

30. The United States is a country of courage.

31. The United States is a country of faith.

32. The United States is a country of hope.

33. The United States is a country of dreams.

34. The United States is a country of possibility.

35. The United States is a country of freedom.

36. The United States is a country of justice.

SPT DATA SHEET

HOLE NO. PR97-205

DATE

05/19/97

DRILLER Mike McNamee

LOCATION

FEATURE Anita Dam

PROJECT BLM

STATE Montana

TEST DEPTH	FROM: 53.00	TO: 54.50
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SEATING PENETRATION

Depth	Penetration *	Sum of Penetration (0 to 0.5')	No. Blows	Sum of Blows (50 max.)
From 53.00 To 53.50	0.50	0.50	0	0
From To				
From To				
From To				
From To				

TEST PENETRATION

Depth	Penetration *	Sum of Penetration (0.5 to 1.5')	No. Blows	Sum of Blows (50 max.)
From 53.50 To 53.60	0.10	0.10	1	1
From 53.60 To 53.70	0.10	0.20	1	2
From 53.70 To 53.80	0.10	0.30	1	3
From 53.80 To 53.90	0.10	0.40	2	5
From 53.90 To 54.00	0.10	0.50	4	9
From 54.00 To 54.10	0.10	0.60	2	11
From 54.10 To 54.20	0.10	0.70	2	13
From 54.20 To 54.30	0.10	0.80	2	15
From 54.30 To 54.40	0.10	0.90	3	18
From 54.40 To 54.50	0.10	1.00	2	20

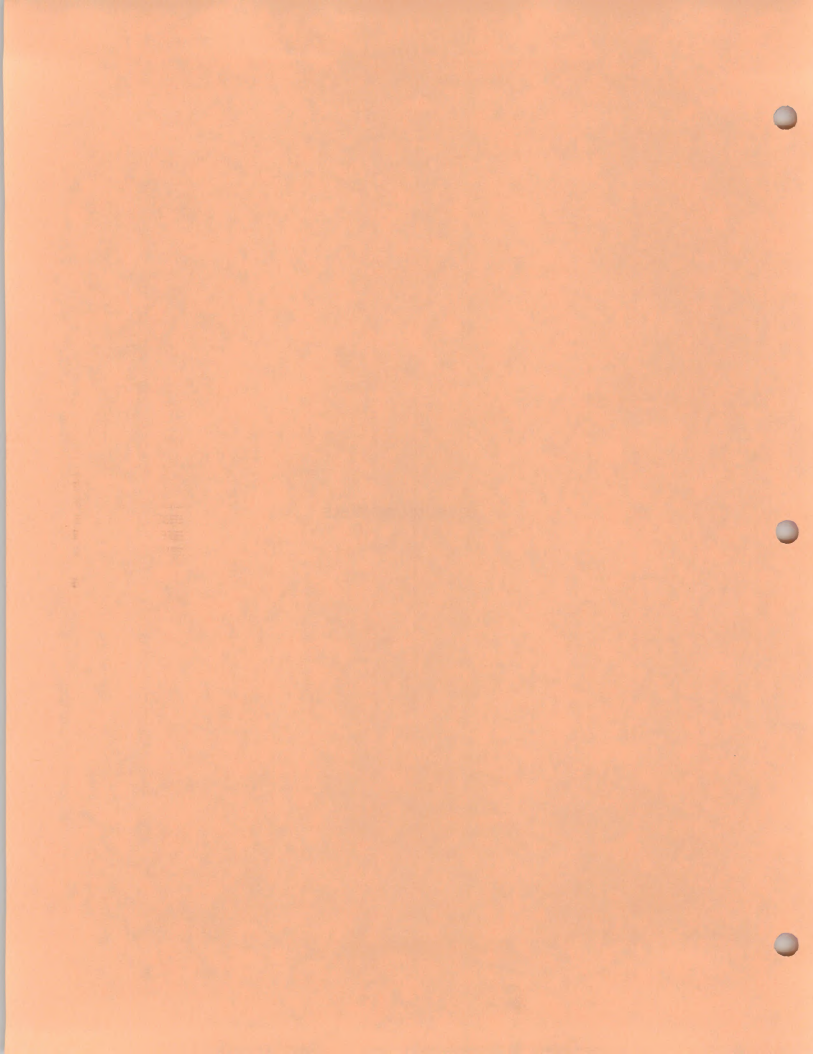
* Attempt to penetrate only 0.1-ft. and record number of blows needed. If in soft zone which exceeds 0.1-ft. per blow, record penetration resulting from one blow.

TOTAL PENETRATION 1.50 TOTAL RECOVERY PERCENT 1.2 RECOVERY 80

TOTAL BLOWS (after seating) 20 EXTRAPOLATED VAL. =

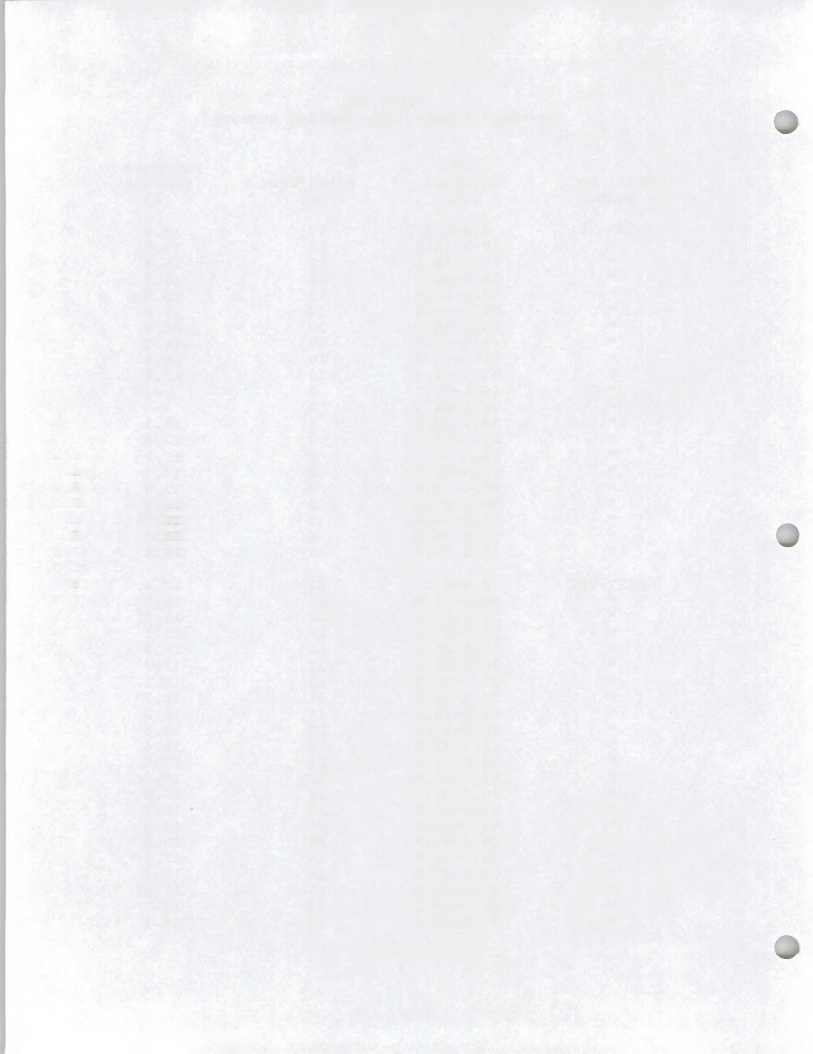
Description and classification of material.

SPT SUMMARY TABLE



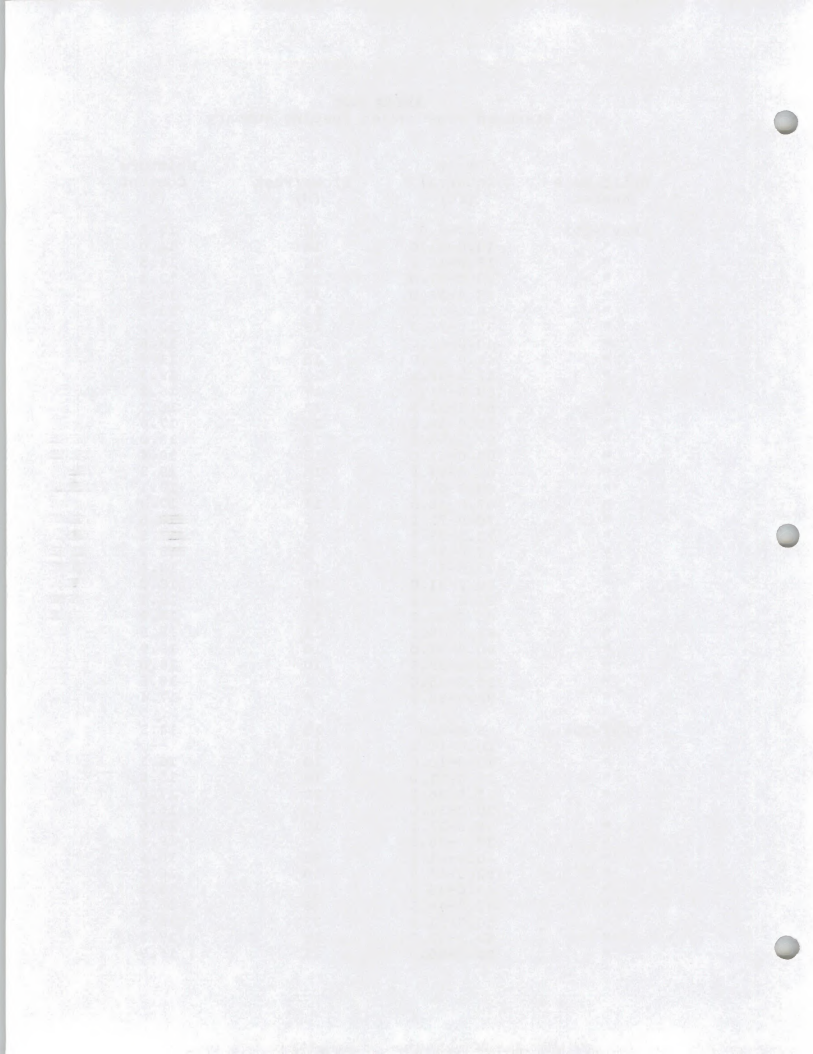
ANITA DAM
Standard Penetration Testing Summary

Drill Hole Number	Test Interval (ft)	Blows/Foot (N)	Moisture Content (%)
PR97-201	5.5-6.5	17	17.0
"	10.5-11.5	18	15.3
"	15.5-16.5	18	15.4
"	35.5-36.5	15	16.3
"	40.0-41.0	17	18.5
"	42.5-43.5	17	18.8
"	45.0-46.0	20	18.7
"	48.5-49.5	17	18.1
"	51.0-52.0	18	18.4
"	53.5-54.5	13	17.8
"	56.0-57.0	0	--
"	58.5-59.5	2	--
"	62.5-63.5	5	16.1
"	80.5-81.5	0	17.4
"	83.0-84.0	2	17.2
"	85.5-86.5	5	17.1
"	88.0-89.0	0	17.0
"	90.5-91.5	0	18.4
"	93.0-94.0	3	16.5
"	95.5-96.5	4	18.4
"	98.0-99.0	0	16.9
PR97-202	5.0-6.0	12	16.4
"	10.0-11.0	15	15.5
"	15.0-16.0	22	13.5
"	20.0-21.0	12	14.2
"	25.0-26.0	16	15.3
"	30.0-31.0	22	11.7
"	32.5-33.5	12	15.1
"	35.0-36.0	21	18.3
"	37.5-38.5	21	16.2
"	40.0-41.0	23	15.6
"	42.5-43.5	24	16.4
"	45.0-46.0	23	15.5
"	47.5-48.5	19	15.5
"	50.0-51.0	23	14.8
"	52.5-53.5	22	15.4
"	55.0-56.0	24	17.5
"	57.5-58.5	23	18.5
"	60.0-61.0	16	17.7
"	62.5-63.5	34	17.1
"	65.0-66.0	23	17.2
"	67.5-68.5	22	14.7
"	70.0-71.0	21	16.1



ANITA DAM
Standard Penetration Testing Summary

Drill Hole Number	Test Interval (ft)	Blows/Foot (N)	Moisture Content (%)
PR97-203	5.0-6.0	11	12.5
"	10.0-11.0	14	14.0
"	15.0-16.0	14	14.5
"	20.0-21.0	15	12.3
"	25.0-26.0	14	15.3
"	30.0-31.0	13	13.3
"	35.0-36.0	18	13.2
"	40.0-41.0	20	13.8
"	45.0-46.0	15	11.8
"	47.5-48.5	13	19.3
"	50.0-51.0	17	16.2
"	52.5-53.5	13	16.3
"	55.0-56.0	20	17.6
"	57.5-58.5	13	18.0
"	60.0-61.0	15	19.4
"	62.5-63.5	16	19.3
"	65.0-66.0	8	19.1
"	67.5-68.5	11	17.8
"	70.0-71.0	5	18.6
"	72.5-73.5	28	17.5
"	75.0-76.0	6	18.7
"	77.5-78.5	14	18.8
"	80.0-81.0	16	18.0
"	82.5-83.5	13	18.4
"	85.0-86.0	12	18.9
"	87.5-88.5	14	18.5
"	90.0-91.0	10	18.9
"	92.5-93.5	10	18.0
"	95.0-96.0	1	18.6
"	97.5-98.5	4	17.4
PR97-204	5.0-6.0	18	14.3
"	10.0-11.0	14	--
"	15.0-16.0	10	16.3
"	20.0-21.0	19	15.5
"	25.0-26.0	20	17.0
"	30.0-31.0	21	16.1
"	36.0-37.0	10	17.6
"	37.5-38.5	6	19.1
"	40.0-41.0	25	10.4
"	42.5-43.5	20	16.2
"	45.0-46.0	18	16.3
"	47.5-48.5	18	16.0
"	50.0-51.0	23	16.9
"	52.5-53.5	18	17.2
"	55.0-56.0	21	16.9



ANITA DAM
Standard Penetration Testing Summary

Drill Hole Number	Test Interval (ft)	Blows/Foot (N)	Moisture Content (%)
PR97-204 (cont)	57.5-58.5	16	18.4
"	60.0-61.0	20	17.6
"	62.5-63.5	11	17.5
"	65.0-66.0	16	19.2
"	67.5-68.5	16	17.6
"	70.0-71.0	14	16.2
"	72.5-73.5	14	17.6
"	75.0-76.0	10	18.3
"	77.5-78.5	1	18.6
"	80.0-81.0	14	16.8
"	82.5-83.5	13	16.1
"	85.0-86.0	17	16.2
"	87.5-88.5	12	16.0
"	90.0-91.0	11	15.7
"	92.5-93.5	12	15.8
"	95.0-96.0	15	15.8
"	97.5-98.5	8	16.1
PR97-205	5.0-6.0	13	13.7
"	10.0-11.0	17	13.5
"	15.0-16.0	19	13.9
"	20.0-21.0	34	8.7
"	22.5-23.5	29	11.9
"	25.0-26.0	30	12.3
"	27.5-28.5	25	13.4
"	30.0-31.0	27	13.1
"	32.5-33.5	23	12.9
"	35.0-36.0	22	14.8
"	37.5-38.5	25	14.7
"	40.0-41.0	20	14.6
"	42.5-43.5	22	14.6
"	45.0-46.0	16	13.8
"	47.5-48.5	22	15.1
"	50.0-51.0	19	15.3
"	53.5-54.5	20	13.8

APPENDIX D
LABORATORY TEST RESULTS



June 23, 1997
F:WPI11WM145115UAR07401.DOC

Mr. Lovell Parish
U.S. Bureau of Reclamation
P.O. Box 36900
Billings, MT 59107-6900

RE: Anita Dam Materials Testing (Call #7)

Dear Lovell:

Enclosed are the results of tests performed on the one hundred thirty-four (134) soil samples that were delivered to our lab on June 4, 1997.

Should you have any questions or comments, please contact us at your convenience.

Sincerely,

MSE-HKM, INC.

Randy Fincher

Randy Fincher
Lab Manager

RF/jar

Enclosures

NOTICE:

IF YOU DETACH ENCLOSURES, PLEASE
INSERT YOUR CODE NUMBER _____

OFFICIAL FILE COPY RECEIVED		
JUN 24 '97		
REPLY DATE		
INFO. COPY TO:		
DATE	INITIAL	TO
		2306
CLASSIFICATION		
PROJECT		
CONTROL NO.		
FOLDER I.D.		



MSE - HKM, Inc.
2727 Central Avenue
P.O. Box 31318
Billings, MT 59107-1318
(406) 656-6309
FAX (406) 656-6308

SUMMARY OF PHYSICAL PROPERTIES TEST RESULTS (Inplace Density)

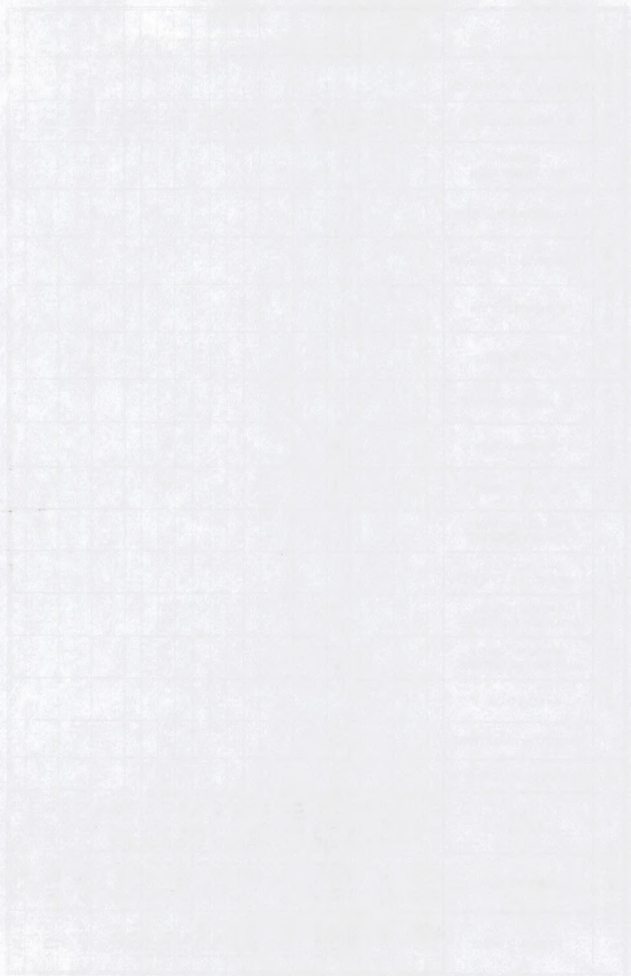
Table: 7
Sheet 1 of 7

Project: BLM

Feature: ANITA DAM

IDENTIFICATION			USCS	PARTICLE-SIZE FRACTIONS						CONSISTENCY LIMITS			SPECIFIC GRAVITY				INPLACE DENSITY		
SAMPLE NUMBER	HOLE NUMBER	DEPTH - Feet (m)	CLASSIFICATION SYMBOL	SMALLER THAN 0.005 mm	0.005 TO 0.074 mm	SAND NO. 200(0.074 mm TO NO. 4(4.75 mm)	GRAVEL NO. 4(4.75 mm) TO 3 IN (76.2 mm)	COBBLES 3 IN (76.2 mm) TO 5 IN (127 mm)	OVERSIZE LARGER THAN 6 IN (127 mm)	LIQUID LIMIT - %	PLASTICITY INDEX - %	SHRINKAGE LIMIT - %	MINUS NO. 4	BULK - PLUS NO. 4	APPARENT - PLUS NO. 4	ABSORPTION-PLUS NO. 4 %	DRY DENSITY - pcf (gm/cm ³)	WATER CONTENT - %	DEGREE OF SATURATION %
11859	97-201	5.0 - 6.5																17.0	
11860	97-201	6.5 - 7.5 PINHOLE #1																15.5	
11861	97-201	6.5 - 7.5 PINHOLE #2																15.2	
11862	97-201	10.0 - 11.5																15.3	
11863	97-201	15.0 - 16.5	CL	82.6		17.4	0.0			45	33							15.4	
11864	97-201	16.5 - 18.5 PINHOLE #1																17.8	
11865	97-201	16.5 - 18.5 PINHOLE #2																15.3	
11866	97-201	35.0 - 36.5																16.3	
11867	97-201	39.5 - 41.0																18.5	
11868	97-201	42.0 - 43.5																18.8	
11869	97-201	44.5 - 46.0																18.7	
11870	97-201	48.0 - 49.5																18.1	
11871	97-201	50.5 - 52.0	CL	74.0		26.0	0.0			39	27							18.4	
11872	97-201	53.0 - 54.5																17.6	
11873	97-201	62.2 - 64.4																16.1	
11874	97-201	66.5 - 67.0 AUGER																16.8	
11875	97-201	72.0 - 73.0 PINHOLE #1																18.1	
11876	97-201	72.0 - 73.0 PINHOLE #2																18.1	
11877	97-201	70.0 - 75.3																17.3	

NOTE: Numbers in parentheses are metric equivalents of numbers directly above.



SUMMARY OF PHYSICAL PROPERTIES TEST RESULTS (Inplace Density)

Table: 7
Sheet 2 of 7

Project: BLM

Feature: ANITA DAM

IDENTIFICATION			USCS	PARTICLE-SIZE FRACTIONS						CONSISTENCY LIMITS			SPECIFIC GRAVITY				INPLACE DENSITY		
SAMPLE NUMBER	HOLE NUMBER	DEPTH - Feet (m)	CLASSIFICATION SYMBOL	SMALLER THAN 0.005 mm	0.005 TO 0.074 mm	SAND NO. 20(0.074 mm TO NO. 4(4.76 mm))	GRAVEL NO. 4(4.76 mm) TO 3 IN.(76.2 mm)	COBBLES 3 IN.(76.2 mm) TO 5 IN.(127 mm)	OVERSIZE LARGER THAN 6 IN.(127 mm)	LIQUID LIMIT - %	PLASTICITY INDEX - %	SHRINKAGE LIMIT - %	MINUS NO. 4	BULK - PLUS NO. 4	APPARENT - PLUS NO. 4	ABSORPTION-PLUS NO. 4 %	DRY DENSITY - pcf (gm/cm ³)	WATER CONTENT - %	DEGREE OF SATURATION %
11879	97-201	80.0 - 82.5 3" SAMPLER															17.0		
11879	97-201	92.5 - 95.0 3" SAMPLER															17.2		
11880	97-201	85.0 - 87.5 3" SAMPLER															17.1		
11881	97-201	87.5 - 90.0 3" SAMPLER															17.0		
11882	97-201	90.0 - 92.5 3" SAMPLER															18.4		
11883	97-201	92.5 - 95.0 3" SAMPLER															16.5		
11884	97-201	95.0 - 95.5 3" SAMPLER															18.4		
11885	97-201	97.5 - 100.0 3" SAMPLER															16.9		
11886	97-202	4.5 - 6.0															16.4		
11887	97-202	9.5 - 11.0															15.5		
11888	97-202	14.5 - 16.0															13.5		
11889	97-202	19.5 - 21.0															14.2		
11892	97-202	19.0 - 24.5 3" SAMPLER															14.9		
11893	97-202	24.5 - 26.0															15.3		
11894	97-202	29.5 - 31.0															11.7		

NOTE: Numbers in parentheses are metric equivalents of numbers directly above.

SUMMARY OF PHYSICAL PROPERTIES TEST RESULTS (Inplace Density)

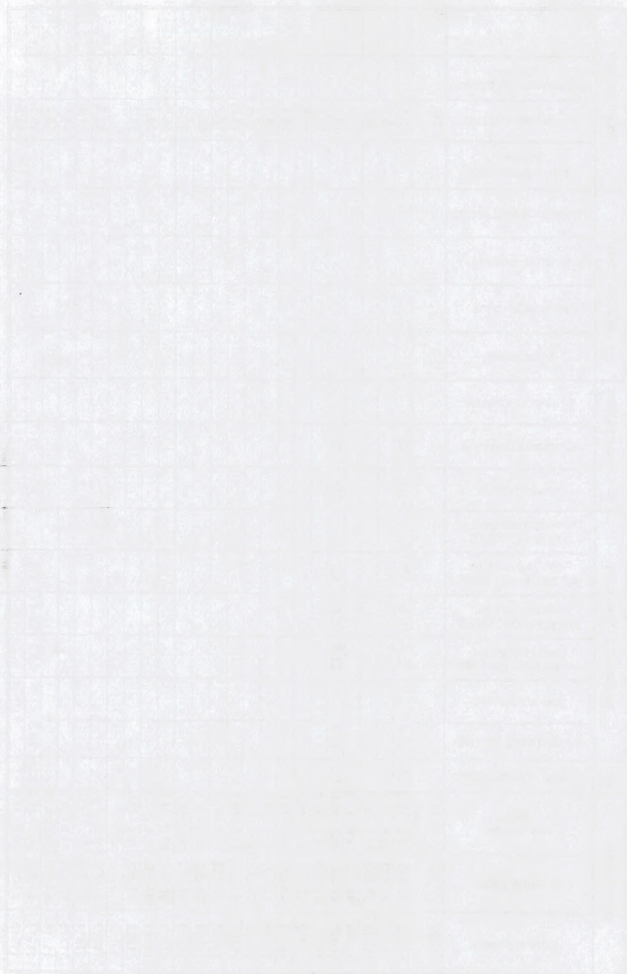
Table: 7
Sheet 3 of 7

Project: BLM

Feature: ANITA DAM

IDENTIFICATION			USCS	PARTICLE-SIZE FRACTIONS						CONSISTENCY LIMITS			SPECIFIC GRAVITY				INPLACE DENSITY		
SAMPLE NUMBER	HOLE NUMBER	DEPTH - Feet (m)	CLASSIFICATION SYMBOL	SMALLER THAN 0.005 mm	0.005 TO 0.074 mm	SAND NO. 200(0.074 mm TO NO. 4(4.75 mm))	GRAVEL NO. 4(4.75 mm) TO 3 IN.(76.2 mm)	COBBLES 3 IN.(76.2 mm) TO 5 IN.(127 mm)	OVERSIZE LARGER THAN 6 IN.(127 mm)	LIQUID LIMIT - %	PLASTICITY INDEX - %	SHRINKAGE LIMIT - %	MINUS NO. 4	BULK - PLUS NO. 4	APPARENT - PLUS NO. 4	ABSORPTION-PLUS NO. 4 %	DRY DENSITY - pcf (gm/cm ³)	WATER CONTENT - %	DEGREE OF SATURATION %
11895	97-202	31.0 - 32.0 3" SAMPLER															5.6		
11896	97-202	32.0 - 33.5	CL	67.4		32.1	0.5	0.0		41	29						15.1		
11897	97-202	34.5 - 36.0															18.3		
11898	97-202	37.0 - 38.5															16.2		
11899	97-202	39.5 - 41.0															15.6		
11900	97-202	42.0 - 43.5	CL	77.4		21.8	0.8	0.0		39	28						16.4		
11901	97-202	44.5 - 46.0															15.5		
11902	97-202	47.0 - 48.5															15.5		
11903	97-202	49.5 - 51.0															14.8		
11904	97-202	52.0 - 53.5															15.4		
11905	97-202	54.5 - 56.0															17.5		
11906	97-202	57.0 - 58.5															18.5		
11907	97-202	59.5 - 61.0															17.7		
11908	97-202	62.0 - 63.5															17.1		
11909	97-202	64.5 - 66.0															17.2		
11910	97-202	67.0 - 68.5															14.7		
11911	97-202	69.5 - 71.0															16.1		
11912	97-202	72.0 - 73.5															16.2		
11913	97-203	4.5 - 6.0															12.5		
11914	97-203	9.5 - 11.0															14.0		
11915	97-203	14.5 - 16.0															14.5		
11916	97-203	19.5 - 21.0															12.3		
11917	97-203	24.5 - 26.0	CL	79.3		19.3	1.4	0.0		45	31						15.3		
11918	97-203	29.5 - 31.0															13.3		

NOTE: Numbers in parentheses are metric equivalents of numbers directly above.



SUMMARY OF PHYSICAL PROPERTIES TEST RESULTS (Inplace Density)

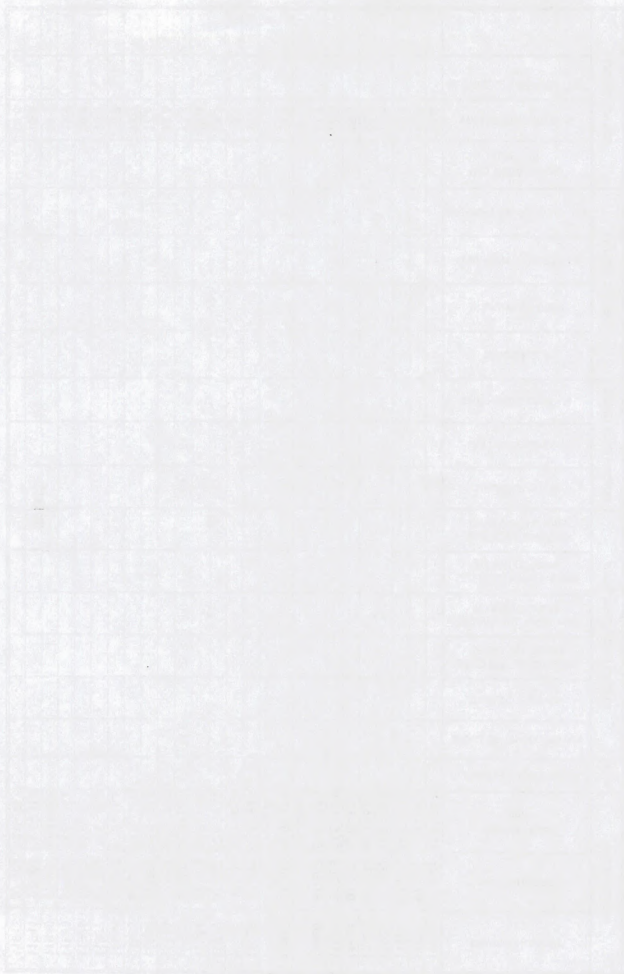
Table: 7
Sheet 4 of 7

Project: BLM

Feature: ANITA DAM

IDENTIFICATION			USCS	PARTICLE-SIZE FRACTIONS						CONSISTENCY LIMITS			SPECIFIC GRAVITY				INPLACE DENSITY			
SAMPLE NUMBER	HOLE NUMBER	DEPTH - Feet (m)	CLASSIFICATION SYMBOL	SMALLER THAN 0.005 mm	0.005 TO 0.074 mm	SAND NO. 20(0.074 mm TO NO. 4(4.75 mm)	GRAVEL NO. 4(4.75 mm) TO 3 IN (76.2 mm)	COBBLES 3 IN (76.2 mm) TO 5 IN (127 mm)	OVERSIZE LARGER THAN 6 IN (127 mm)	LIQUID LIMIT - %	PLASTICITY INDEX - %	SHRINKAGE LIMIT - %	MINUS NO. 4	BULK - PLUS NO. 4	APPARENT - PLUS NO. 4	ABSORPTION-PLUS NO. 4 %	DRY DENSITY - pcf (gm/cm ³)	WATER CONTENT - %	DEGREE OF SATURATION %	
11919	97-203	34.5 - 36.0																13.2		
11920	97-203	39.5 - 41.0																13.8		
11921	97-203	44.5 - 46.0																11.8		
11922	97-203	47.0 - 48.5																19.3		
11923	97-203	49.5 - 51.0																16.2		
11920	97-203	52.0 - 53.5																19.3		
11920	97-203	54.5 - 56.0																17.6		
11926	97-203	56.0 - 57.0																17.7		
		Pinhole #1																		
11927	97-203	56.0 - 57.9																16.9		
		Pinhole #2																		
11920	97-203	57.0 - 58.5																18.0		
11920	97-203	59.5 - 61.0																19.4		
11930	97-203	62.0 - 63.5																19.3		
11931	97-203	64.5 - 66.0																19.1		
11932	97-203	67.0 - 68.5	CL	74.6		25.4	0.0			43	31							17.8		
11933	97-203	69.5 - 71.0																18.0		
11934	97-203	72.0 - 73.5																17.5		
11935	97-203	74.5 - 76.0																18.7		
11936	97-203	77.0 - 78.5																18.0		
11937	97-203	79.5 - 81.0																18.0		
11938	97-203	82.0 - 83.5																18.4		
11939	97-203	84.5 - 86.0																18.9		
11940	97-203	87.0 - 88.5																18.5		
11941	97-203	89.5 - 91.0																18.9		
11942	97-203	92.0 - 93.5																18.0		

NOTE: Numbers in parentheses are metric equivalents of numbers directly above.



SUMMARY OF PHYSICAL PROPERTIES TEST RESULTS (Inplace Density)

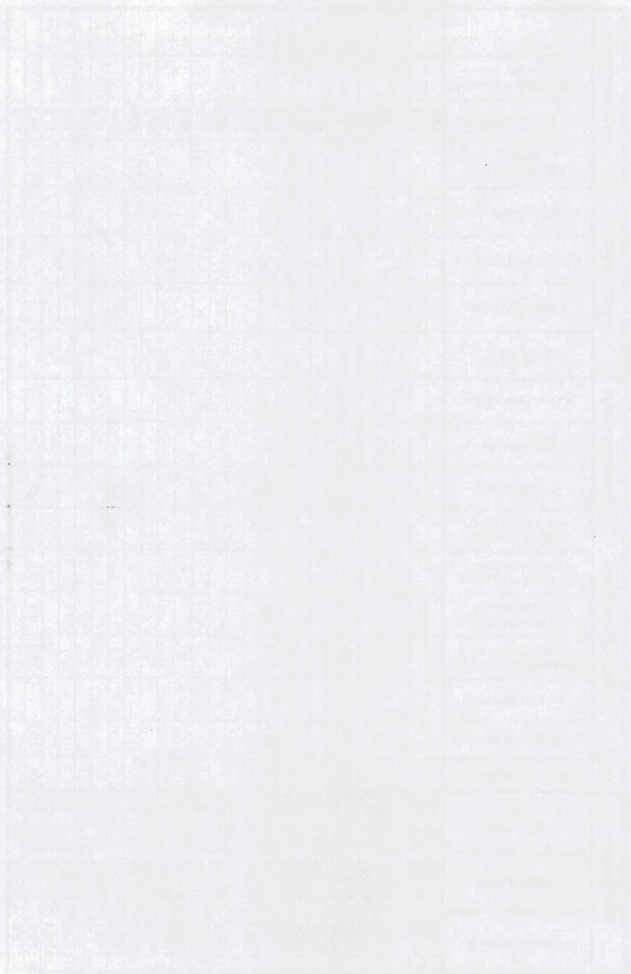
Table: 7
Sheet 5 of 7

Project: BLM

Feature: ANITA DAM

IDENTIFICATION			USCS	PARTICLE-SIZE FRACTIONS						CONSISTENCY LIMITS			SPECIFIC GRAVITY				INPLACE DENSITY		
SAMPLE NUMBER	HOLE NUMBER	DEPTH - Feet (m)	CLASSIFICATION SYMBOL	SMALLER THAN 0.005 mm	0.005 TO 0.074 mm	SAND NO. 200(0.074 mm TO NO. 4(4.75 mm)	GRAVEL NO. 4(4.75 mm) TO 3 IN (76.2 mm)	COBBLES 3 IN (76.2 mm) TO 5 IN (127 mm)	OVERSIZE LARGER THAN 6 IN (127 mm)	LIQUID LIMIT - %	PLASTICITY INDEX - %	SHRINKAGE LIMIT - %	MINUS NO. 4	BULK - PLUS NO. 4	APPARENT - PLUS NO. 4	ABSORPTION-PLUS NO. 4 %	DRY DENSITY - pcf (gm/cm ³)	WATER CONTENT - %	DEGREE OF SATURATION %
11943	97-203	94.5 - 96.0																18.6	
11948	97-203	97.0 - 98.5																17.4	
11948	97-204	4.5 - 6.0																14.3	
11948	97-204	14.5 - 16.0																16.3	
11947	97-204	19.5 - 21.0																15.5	
11948	97-204	24.5 - 26.0																17.0	
11946	97-204	29.5 - 31.0																16.1	
11950	97-204	35.5 - 37.0																17.0	
11951	97-204	37.0 - 38.5																19.1	
11952	97-204	39.5 - 41.0	CL	76.6		23.4	0.0			40	28							10.4	
11953	97-204	41.0 CLEANOUT																13.4	
11950	97-204	42.0 - 43.5																16.2	
11955	97-204	44.5 - 46.0																16.3	
11956	97-204	47.0 - 48.5																16.0	
11951	97-204	49.5 - 51.0																16.9	
11950	97-204	52.0 - 53.5																17.2	
11950	97-204	54.5 - 56.0																16.9	
11950	97-204	57.0 - 58.5																16.4	
11951	97-204	59.5 - 61.0																17.0	
11962	97-204	62.0 - 63.5																17.5	
11963	97-204	64.5 - 66.0																19.2	
11964	97-204	67.0 - 68.5																17.6	
11965	97-204	69.5 - 71.0	CL	70.7		28.4	0.9	0.0		37	26							16.2	
11966	97-204	72.0 - 73.5																17.6	

NOTE: Numbers in parentheses are metric equivalents of numbers directly above.



SUMMARY OF PHYSICAL PROPERTIES TEST RESULTS (Inplace Density)

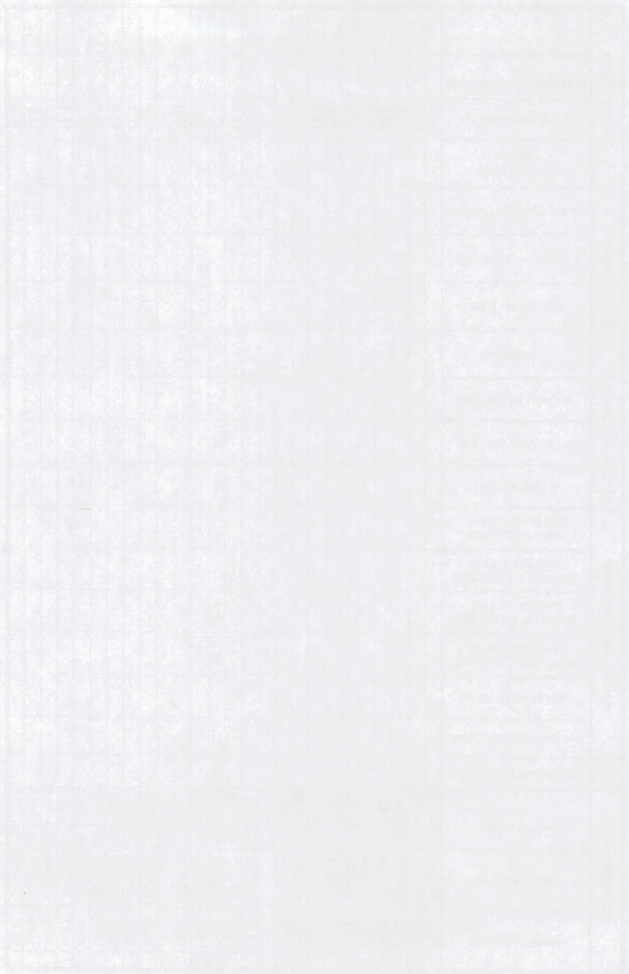
Table: 7
Sheet 6 of 7

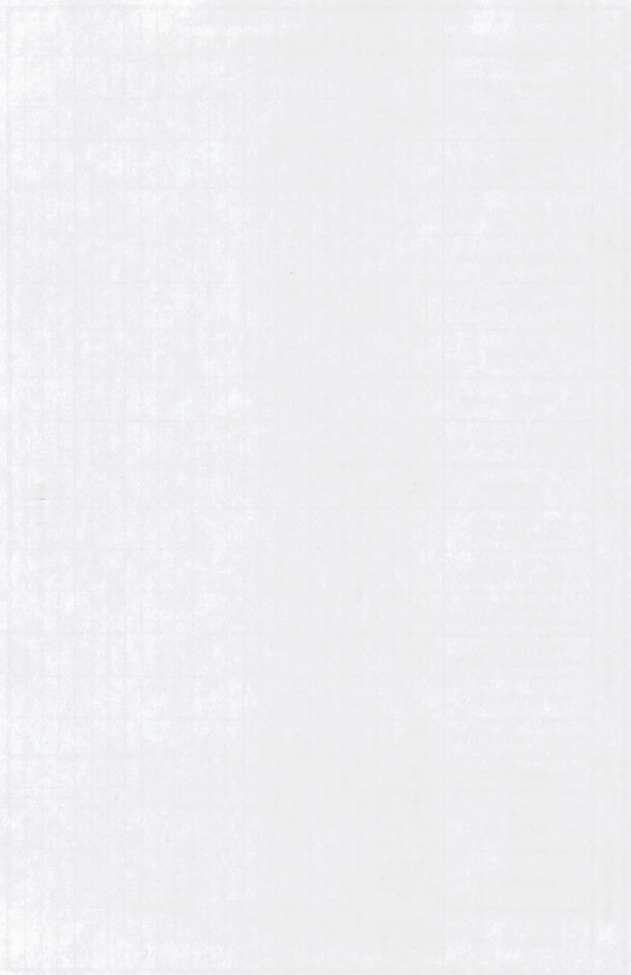
Project: BLM

Feature: ANITA DAM

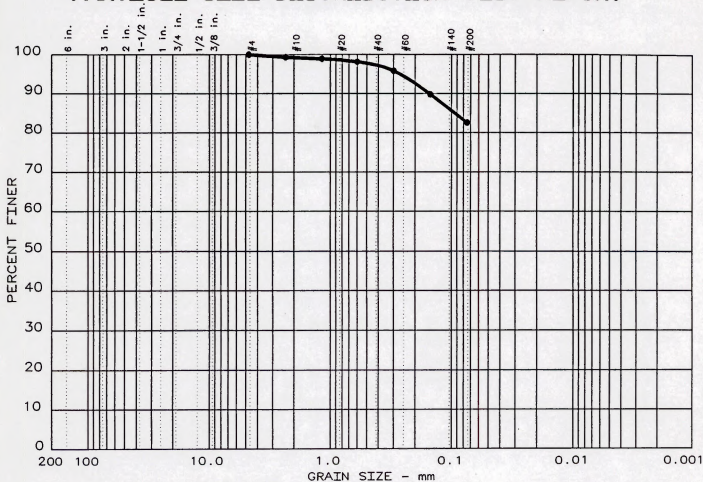
IDENTIFICATION			USCS	PARTICLE-SIZE FRACTIONS						CONSISTENCY LIMITS			SPECIFIC GRAVITY				INPLACE DENSITY		
SAMPLE NUMBER	HOLE NUMBER	DEPTH - Feet (m)	CLASSIFICATION SYMBOL	SMALLER THAN 0.005 mm	0.005 TO 0.074 mm	SAND NO. 200(0.074 mm TO NO. 4(4.75 mm)	GRAVEL NO. 4(4.75 mm) TO 3 IN.(76.2 mm)	COBBLES 3 IN.(76.2 mm) TO 5 IN.(127 mm)	OVERSIZE LARGER THAN 6 IN.(127 mm)	LIQUID LIMIT - %	PLASTICITY INDEX - %	SHRINKAGE LIMIT - %	MINUS NO. 4	BULK - PLUS NO. 4	APPARENT - PLUS NO. 4	ABSORPTION-PLUS NO. 4 %	DRY DENSITY - pcf (gm/cm3)	WATER CONTENT - %	DEGREE OF SATURATION %
11967	97-204	74.5 - 76.0																18.3	
11969	97-204	77.0 - 78.5																18.6	
11969	97-204	79.5 - 81.0																16.6	
11970	97-204	82.0 - 83.5																16.1	
11971	97-204	84.5 - 86.0																16.2	
11972	97-204	87.0 - 88.5																16.0	
11973	97-204	89.5 - 91.0																15.7	
11970	97-204	92.0 - 93.5																15.8	
11970	97-204	94.5 - 96.0																15.8	
11970	97-204	97.0 - 98.5																16.1	
11971	97-205	4.5 - 6.0																13.7	
11970	97-205	9.5 - 11.0																13.5	
11970	97-205	14.5 - 16.0	CL	78.0		22.0	0.0			40	27							13.9	
11980	97-205	19.5 - 21.0																8.7	
11981	97-205	21.0 CONTACT																10.0	
11982	97-205	22.0 - 23.5																11.9	
11983	97-205	24.5 - 26.0																12.3	
11984	97-205	27.0 - 28.5																13.4	
11985	97-205	29.5 - 31.0																13.1	
11986	97-205	32.0 - 33.5																12.9	
11987	97-205	34.5 - 36.0																14.8	
11988	97-205	37.0 - 38.5																14.7	
11989	97-205	39.5 - 41.0																14.6	
11990	97-205	42.0 - 43.5																14.6	

NOTE: Numbers in parentheses are metric equivalents of numbers directly above.





PARTICLE SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
1	0.0	0.0	17.4	82.6		CL	45	33

SIEVE inches size	PERCENT FINER		
•			
GRAIN SIZE			
D ₆₀			
D ₃₀			
D ₁₀			
COEFFICIENTS			
C _c			
C _u			

SIEVE number size	PERCENT FINER		
•			
4	100.0		
8	99.3		
16	98.9		
30	98.1		
50	95.8		
100	89.8		
200	82.6		

Sample information:
 • 97-201 @ 15.0' - 16.5'
 (SPT sample)
 Lean clay with sand

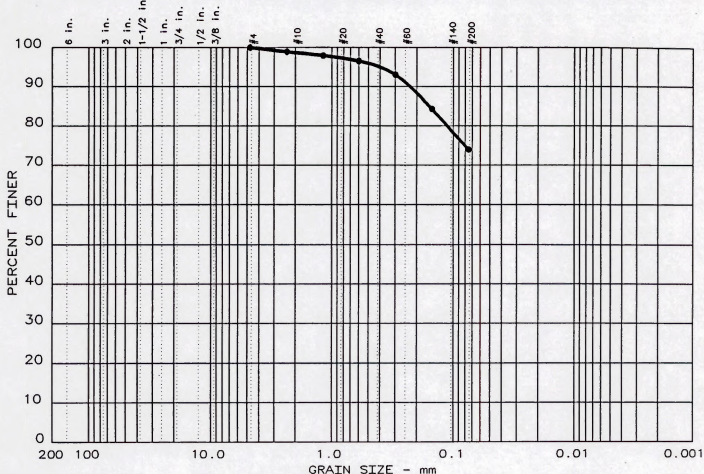
Remarks:
 Lab #11863.
 Sampled by client.
 Natural Moist. = 15.4%.
 Coll #7.

MSE-HKM, INC.

Project No.: 11M145.115
 Project: U.S.B.R. - Anita Dam (BLM)
 Date: 06-20-97

Fig. No.: 1

PARTICLE SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
● 2	0.0	0.0	26.0	74.0		CL	39	27

SIEVE inches size	PERCENT FINER		
●			
GRAIN SIZE			
D ₆₀			
D ₃₀			
D ₁₀			
COEFFICIENTS			
C _c			
C _u			

SIEVE number size	PERCENT FINER		
●			
4	100.0		
8	98.9		
16	97.9		
30	96.5		
50	93.0		
100	84.3		
200	74.0		

Sample information:
 ● 97-201 @ 50.5'- 52.0'
 (SPT sample)
 Lean clay with sand

Remarks:
 Lab #11871.
 Sampled by client.
 Natural Moist.= 18.4%.
 Call #7.

MSE-HKM, INC.

Project No.: 11M145.115
 Project: U.S.B.R.- Anita Dam (BLM)

Date: 06-20-97

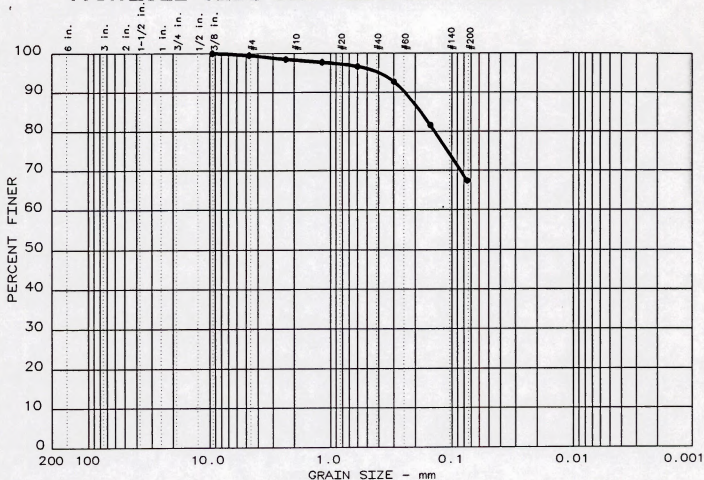
Fig. No.: 2

UNITED STATES DEPARTMENT OF AGRICULTURE



UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ECONOMIC ANALYSIS
WASHINGTON, D. C. 20250

PARTICLE SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
● 3	0.0	0.5	32.1	67.4		CL	41	29

SIEVE inches size	PERCENT FINER		
●	100.0		
0.375			
GRAIN SIZE			
D ₆₀			
D ₃₀			
D ₁₀			
COEFFICIENTS			
C _c			
C _u			

SIEVE number size	PERCENT FINER		
●			
4	99.5		
8	98.5		
16	97.7		
30	96.6		
50	92.7		
100	81.6		
200	67.4		

Sample information:
 ● 97-202 @ 32.0' - 33.5'
 (SPT sample)
 Sandy lean clay

Remarks:
 Lab #11896.
 Sampled by client.
 Natural Moist. = 15.1%.
 Call #7.

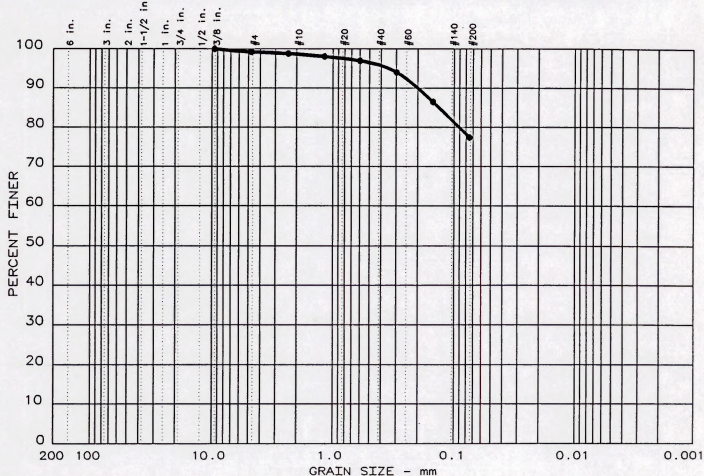
MSE-HKM, INC.

Project No.: 11M145.115
 Project: U.S.B.R. - Anita Dam (BLM)

Date: 06-20-97

Fig. No.: 3

PARTICLE SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
● 4	0.0	0.8	21.8	77.4		CL	39	28

SIEVE inches size	PERCENT FINER		
●			
0.375	100.0		
GRAIN SIZE			
D ₆₀			
D ₃₀			
D ₁₀			
COEFFICIENTS			
C _c			
C _u			

SIEVE number size	PERCENT FINER		
●			
4	99.2		
8	98.8		
16	98.0		
30	96.9		
50	94.0		
100	86.5		
200	77.4		

Sample information:
 ● 97-202 @ 42.0' - 43.5'
 (SPT sample)
 Lean clay with sand

Remarks:
 Lab #11900.
 Sampled by client.
 Natural Moist. = 16.4%.
 Call #7.

MSE-HKM, INC.

Project No.: 11M145.115
 Project: U.S.B.R.- Anita Dam (BLM)

Date: 06-20-97

Fig. No.: 4

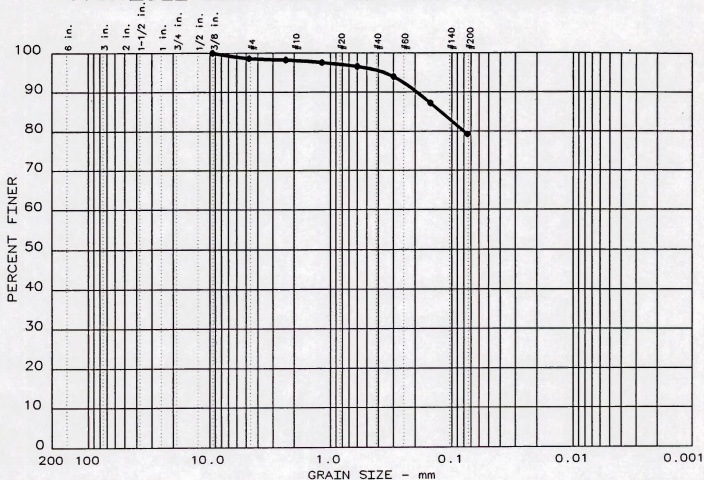
UNITED STATES DEPARTMENT OF AGRICULTURE

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PARTICLE SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
● 6	0.0	1.4	19.3	79.3		CL	45	31

SIEVE inches size	PERCENT FINER		
●			
0.375	100.0		
GRAIN SIZE			
D ₆₀			
D ₃₀			
D ₁₀			
COEFFICIENTS			
C _c			
C _u			

SIEVE number size	PERCENT FINER		
●			
4	98.6		
8	98.2		
16	97.5		
30	96.5		
50	93.9		
100	87.2		
200	79.3		

Sample information:
 ● 97-203 @ 24.5' - 26.0'
 (SPT sample)
 Lean clay with sand

Remarks:
 Lab #11917.
 Sampled by client.
 Natural Moist.= 15.3%.
 Call #7.

MSE-HKM, INC.

Project No.: 11M145.115
 Project: U.S.B.R.- Anita Dam (BLM)

Date: 06-20-97

Fig. No.: 5

PERCENT FINER

GRAIN SIZE - mm

Grain Size (mm)	Sieve	Percent Finer (%)
4.75	#4	98
2.0	#10	98
0.85	#20	97
0.425	#40	95
0.25	#60	90
0.106	#140	84
0.075	#200	73

[illegible]

SIEVE inches size	PERCENT FINER		
	●		
	GRAIN SIZE		
D ₆₀			
D ₃₀			
D ₁₀			
	COEFFICIENTS		
C _c			
C _u			

SIEVE number size	PERCENT FINER		
	●		
4	100.0		
8	99.7		
16	98.8		
30	97.5		
50	93.9		
100	85.0		
200	74.6		

Remarks:
Lab #11932.
Sampled by client.
Natural Moist.= 17.8%.
Call #7.

Fig. No.: 6

The graph illustrates the grain size distribution of a soil sample. The y-axis represents the percentage of soil finer than a given grain size, ranging from 0 to 100. The x-axis represents the grain size in millimeters, on a logarithmic scale from 200 mm to 0.001 mm. The curve shows that the soil is predominantly fine-grained, with most of the material passing through the No. 200 sieve (0.075 mm).

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
20	100
10	100
7.5	100
6	100
4.75	100
3.75	100
3.0	100
2.5	100
2.0	100
1.5	100
1.18	100
0.85	100
0.75	100
0.6	100
0.425	100
0.3	100
0.25	100
0.2	100
0.15	100
0.106	100
0.075	100
0.06	100
0.05	100
0.0425	100
0.0375	100
0.03	100
0.025	100
0.02	100
0.015	100
0.0106	100
0.0075	100
0.006	100
0.005	100
0.00425	100
0.00375	100
0.003	100
0.0025	100
0.002	100
0.0015	100
0.00106	100
0.00075	100
0.0006	100
0.0005	100
0.000425	100
0.000375	100
0.0003	100
0.00025	100
0.0002	100
0.00015	100
0.000106	100
0.000075	100
0.00006	100
0.00005	100
0.0000425	100
0.0000375	100
0.00003	100
0.000025	100
0.00002	100
0.000015	100
0.0000106	100
0.0000075	100
0.000006	100
0.000005	100
0.00000425	100
0.00000375	100
0.000003	100
0.0000025	100
0.000002	100
0.0000015	100
0.00000106	100
0.00000075	100
0.0000006	100
0.0000005	100
0.000000425	100
0.000000375	100
0.0000003	100
0.00000025	100
0.0000002	100
0.00000015	100
0.000000106	100
0.000000075	100
0.00000006	100
0.00000005	100
0.0000000425	100
0.0000000375	100
0.00000003	100
0.000000025	100
0.00000002	100
0.000000015	100
0.0000000106	100
0.0000000075	100
0.000000006	100
0.000000005	100
0.00000000425	100
0.00000000375	100
0.000000003	100
0.0000000025	100
0.000000002	100
0.0000000015	100
0.00000000106	100
0.00000000075	100
0.0000000006	100
0.0000000005	100
0.000000000425	100
0.000000000375	100
0.0000000003	100
0.00000000025	100
0.0000000002	100
0.00000000015	100
0.000000000106	100
0.000000000075	100
0.00000000006	100
0.00000000005	100
0.0000000000425	100
0.0000000000375	100
0.00000000003	100
0.000000000025	100
0.00000000002	100
0.000000000015	100
0.0000000000106	100
0.0000000000075	100
0.000000000006	100
0.000000000005	

[illegible]

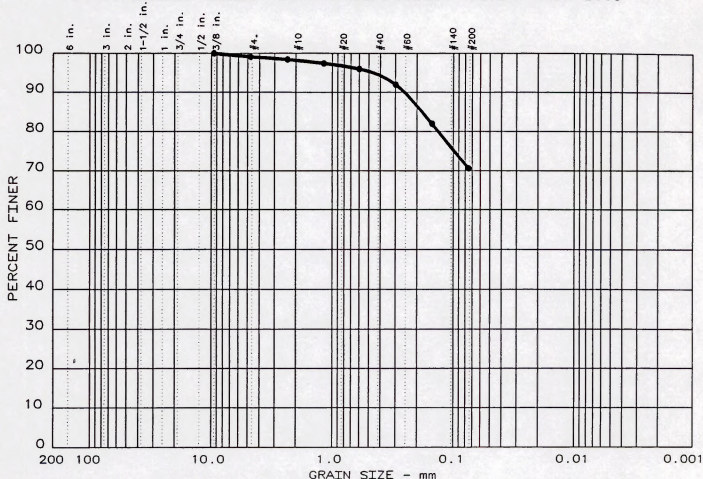
SIEVE inches size	PERCENT FINER		
	●		
X	GRAIN SIZE		
D ₆₀ D ₃₀ D ₁₀			
X	COEFFICIENTS		
C _c C _u			

SIEVE number size	PERCENT FINER		
	●		
4	100.0		
8	99.5		
16	98.8		
30	97.9		
50	95.1		
100	86.8		
200	76.6		

Remarks:
Lab #11952.
Sampled by client.
Natural Moist.= 10.4%.
Call #7.

Fig. No.: 7

PARTICLE SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
9	0.0	0.9	28.4	70.7		CL	37	26

SIEVE inches size	PERCENT FINER		
0.375	100.0		
GRAIN SIZE			
D ₆₀			
D ₃₀			
D ₁₀			
COEFFICIENTS			
C _c			
C _u			

SIEVE number size	PERCENT FINER		
4	99.1		
8	98.4		
16	97.4		
30	96.0		
50	92.0		
100	82.0		
200	70.7		

Sample information:
 • 97-204 @ 69.5' - 71.0'
 (SPT sample)
 Lean clay with sand

Remarks:
 Lab #11965.
 Sampled by client.
 Natural Moist. = 16.2%.
 Call #7.

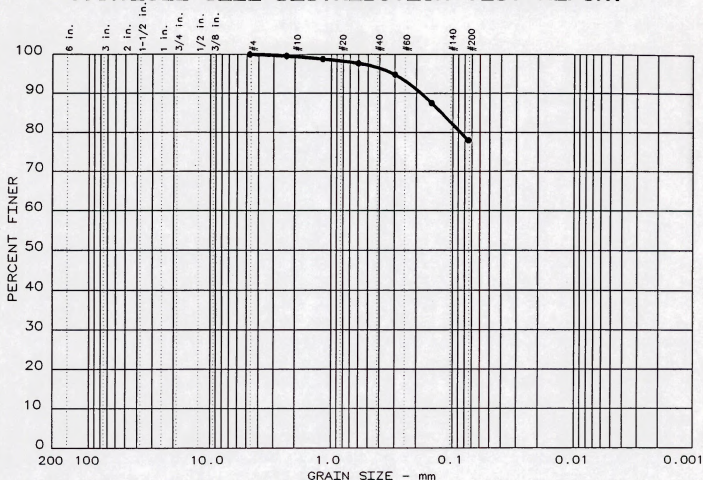
MSE-HKM, INC.

Project No.: 11M145.115
 Project: U.S.B.R. - Anita Dam (BLM)

Date: 06-20-97

Fig. No.: 8

PARTICLE SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
● 10	0.0	0.0	22.0	78.0		CL	40	27

SIEVE inches size	PERCENT FINER		
●			
GRAIN SIZE			
D ₆₀			
D ₃₀			
D ₁₀			
COEFFICIENTS			
C _c			
C _u			

SIEVE number size	PERCENT FINER		
●			
4	100.0		
8	99.6		
16	98.8		
30	97.7		
50	94.8		
100	87.5		
200	78.0		

Sample information:
 ● 97-205 @ 14.5' - 16.0'
 (SPT sample)
 Lean clay with sand

Remarks:
 Lab #11979.
 Sampled by client.
 Natural Moist. = 13.9%.
 Call #7.

MSE-HKM, INC.

Project No.: 11M145.115
 Project: U.S.B.R. - Anita Dam (BLM)

Date: 06-20-97



Fig. No.: 9

PERCENT FINER

GRAIN SIZE - mm

Sieve Size (mm)	Sieve Size (No.)	Percent Finer (%)
4.75	#4	100
2.0	#10	99
0.85	#20	98
0.425	#40	97
0.25	#60	94
0.15	#100	85
0.075	#200	75

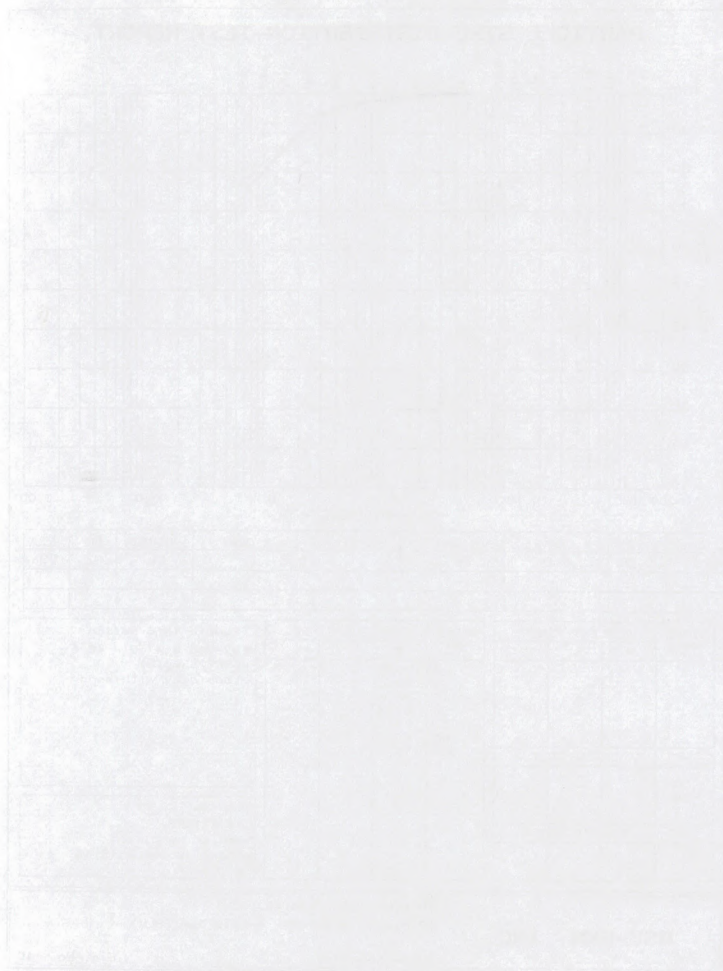
[illegible]

SIEVE inches size	PERCENT FINER		
	●		
	GRAIN SIZE		
D ₆₀			
D ₃₀			
D ₁₀			
	COEFFICIENTS		
C _c			
C _u			

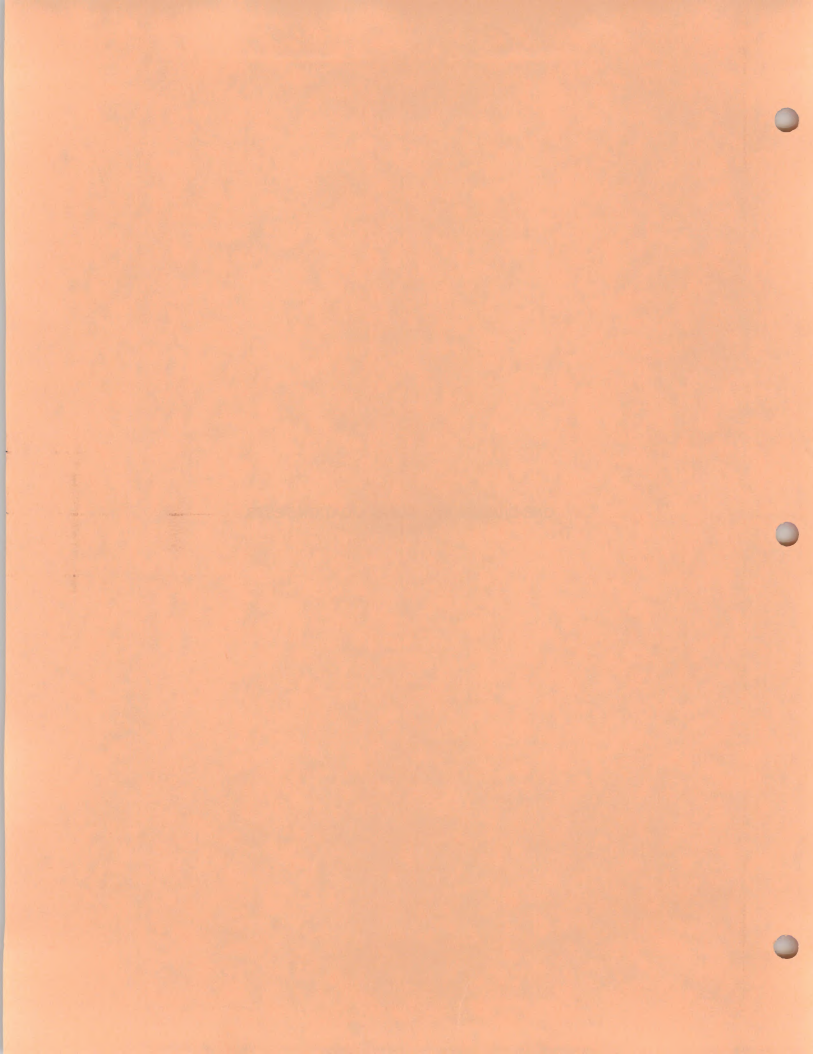
SIEVE number size	PERCENT FINER		
	●		
4	100.0		
8	99.6		
16	98.8		
30	97.6		
50	94.2		
100	85.8		
200	75.8		

Remarks:
Lab #11992.
Sampled by client.
Natural Moist. = 15.1%.
Call #7.

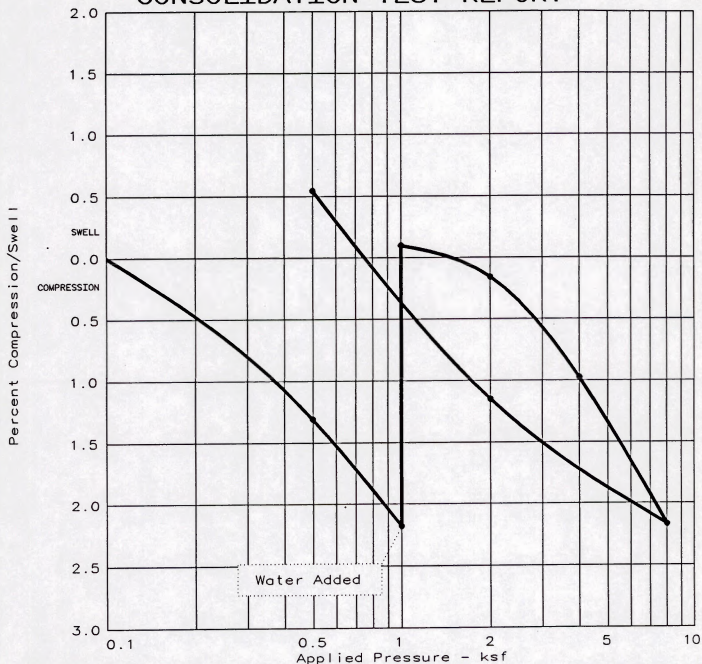
Fig. No.: 10



ONE-DIMENSIONAL CONSOLIDATION TESTS
PR97-201



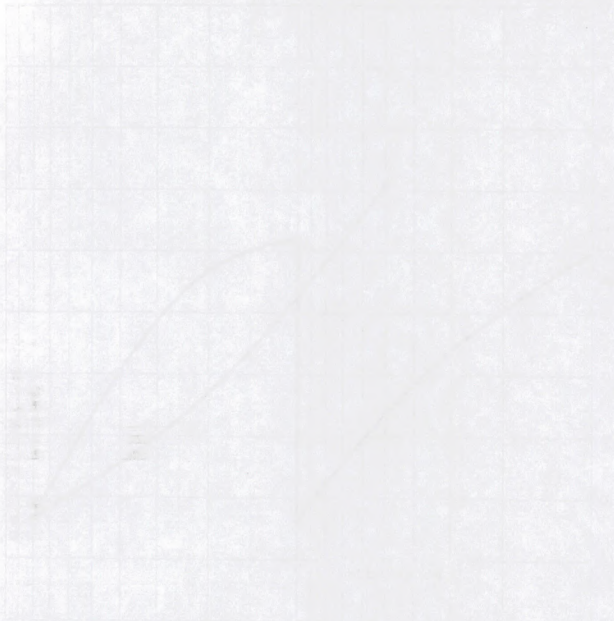
CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Dens. (pcf)	LL	PI	Sp.Gr.	Initial void ratio
93.5 %	18.4 %	109.2	N/T	N/T	2.650	0.5207

TEST RESULTS			MATERIAL DESCRIPTION
Percent swell = 2.3			Existing embankment
Project No.: 11M145.115 Project: U.S.B.R.- Anita Dam Location: DH 97-201 @ 32.4'- 33.5'			Class: N/T
Date: 05-29-97			Remarks:
CONSOLIDATION TEST REPORT			Lab #11847.
MSE-HKM, INC.			Sampled by client.
			Sp.Gr. is assumed.
			Swell pressure not determined (> 8ksf).
			Fig. No. 1

PROBLEM SET 1: LINEAR ALGEBRA



PROBLEM SET 1: LINEAR ALGEBRA

1. Find the eigenvalues and eigenvectors of the matrix $A = \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$.	
2. Find the eigenvalues and eigenvectors of the matrix $B = \begin{pmatrix} 2 & 1 \\ 1 & 2 \end{pmatrix}$.	
3. Find the eigenvalues and eigenvectors of the matrix $C = \begin{pmatrix} 3 & 0 \\ 0 & 3 \end{pmatrix}$.	
4. Find the eigenvalues and eigenvectors of the matrix $D = \begin{pmatrix} 4 & 3 \\ 3 & 4 \end{pmatrix}$.	
5. Find the eigenvalues and eigenvectors of the matrix $E = \begin{pmatrix} 5 & 4 \\ 4 & 5 \end{pmatrix}$.	
6. Find the eigenvalues and eigenvectors of the matrix $F = \begin{pmatrix} 6 & 5 \\ 5 & 6 \end{pmatrix}$.	
7. Find the eigenvalues and eigenvectors of the matrix $G = \begin{pmatrix} 7 & 6 \\ 6 & 7 \end{pmatrix}$.	
8. Find the eigenvalues and eigenvectors of the matrix $H = \begin{pmatrix} 8 & 7 \\ 7 & 8 \end{pmatrix}$.	
9. Find the eigenvalues and eigenvectors of the matrix $I = \begin{pmatrix} 9 & 8 \\ 8 & 9 \end{pmatrix}$.	
10. Find the eigenvalues and eigenvectors of the matrix $J = \begin{pmatrix} 10 & 9 \\ 9 & 10 \end{pmatrix}$.	

CONSOLIDATION TEST PROJECT DATA

Test No. 19

Project Number: 11M145.115
 Project: U.S.B.R.- Anita Dam
 Date: 05-29-97
 Location 1: DH 97-201 @ 32.4'- 33.5'
 2:
 Remarks 1: Lab #11847.
 2: Sampled by client.
 3: Sp.Gr. is assumed.
 4: Swell pressure not
 5: determined (> 8ksf).
 Material description Existing embankment

Classification: N/T
 Liquid limit: N/T
 Plasticity index: N/T
 Figure Number: 1

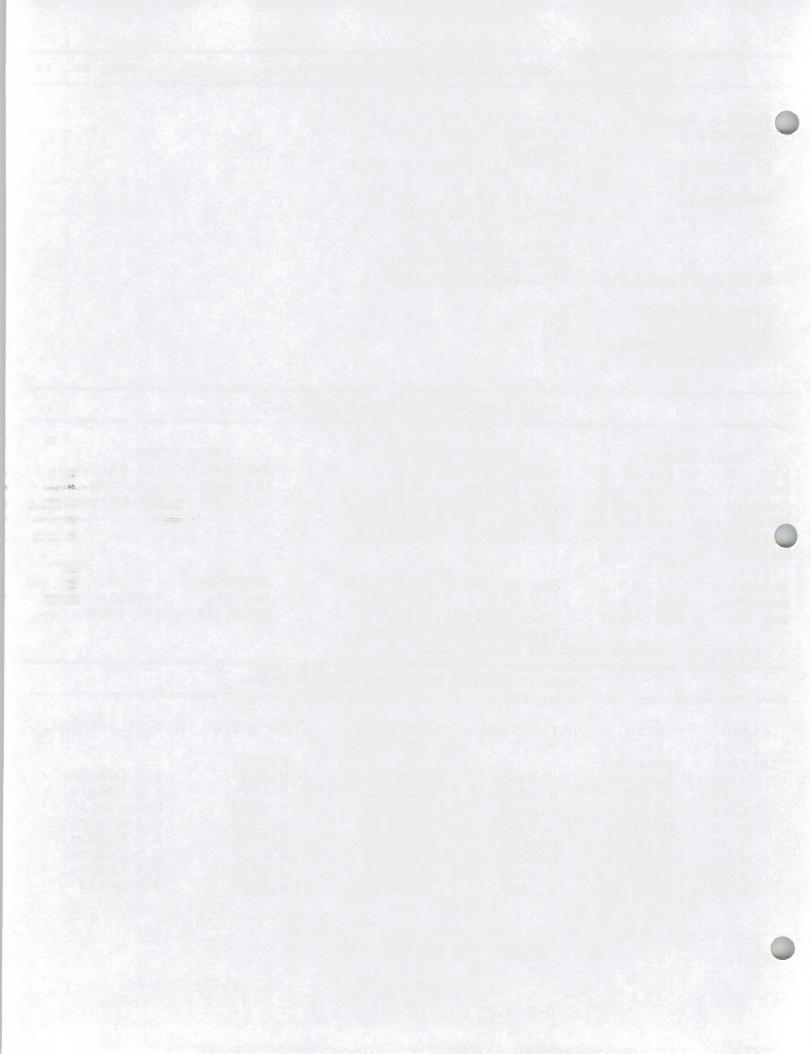
CONSOLIDATION TEST SPECIMEN DATA

TOTAL SAMPLE		BEFORE TEST	AFTER TEST
Wet w+t = 242.30 g.		Oedometer No. = 1	Wet w+t = 537.00 g.
Dry w+t = 204.70 g.		Machine No. = 1	Dry w+t = 519.50 g.
Tare wt. = 0.00 g.		Spec. Gravity = 2.650	Tare wt. = 435.00 g.
Height = 1.0000 in.		Height = 1.0000 in.	
Diameter = 1.9410 in.		Diameter = 1.9410 in.	
Weight = 100.41 g.			
Moisture = 18.4 %		Ht. Solids = 0.6576 in.	Moisture = 20.7 %
Wet Den. = 129.3 pcf		Dry wt. = 84.83 g.	Dry wt. = 84.50 g. *
Dry Den. = 109.2 pcf		Void ratio = 0.5207	Void ratio = 0.5289
		Saturation = 93.5 %	

* Final dry weight used in calculations

CONSOLIDATION TEST READINGS SUMMARY

LOAD (ksf)	DIAL (in.)	DEFLECTION (in.)	CORRECTED DIAL (in.)	VOID RATIO	% SWELL/COMPRS.
Initial	0.20000			0.5207	
0.50	0.21380	0.0007	0.21310	0.5007	1.3 Compr.
1.00	0.22290	0.0011	0.22180	0.4875	2.2 Compr.
1.00	0.20010	0.0011	0.19900	0.5222	0.1 Swell
2.00	0.20310	0.0015	0.20160	0.5182	0.2 Compr.
4.00	0.21175	0.0020	0.20975	0.5058	1.0 Compr.
8.00	0.22420	0.0025	0.22170	0.4877	2.2 Compr.
2.00	0.21300	0.0015	0.21150	0.5032	1.2 Compr.
0.50	0.19525	0.0007	0.19455	0.5289	0.5 Swell



CONSOLIDATION TEST RESULTS

Compression index = NOT SELECTED

Preconsolidation pressure = NOT SELECTED

Load 0.50 ksf CONSOLIDATION TEST READINGS Load No. 1

Machine Deflection 0.0007

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.20000	11	1440.00	0.21380
2	0.25	0.20120			
3	0.50	0.20130			
4	1.00	0.20140			
5	2.00	0.20150			
6	4.00	0.20150			
7	8.00	0.20180			
8	15.00	0.20200			
9	30.00	0.20230			
10	60.00	0.20290			

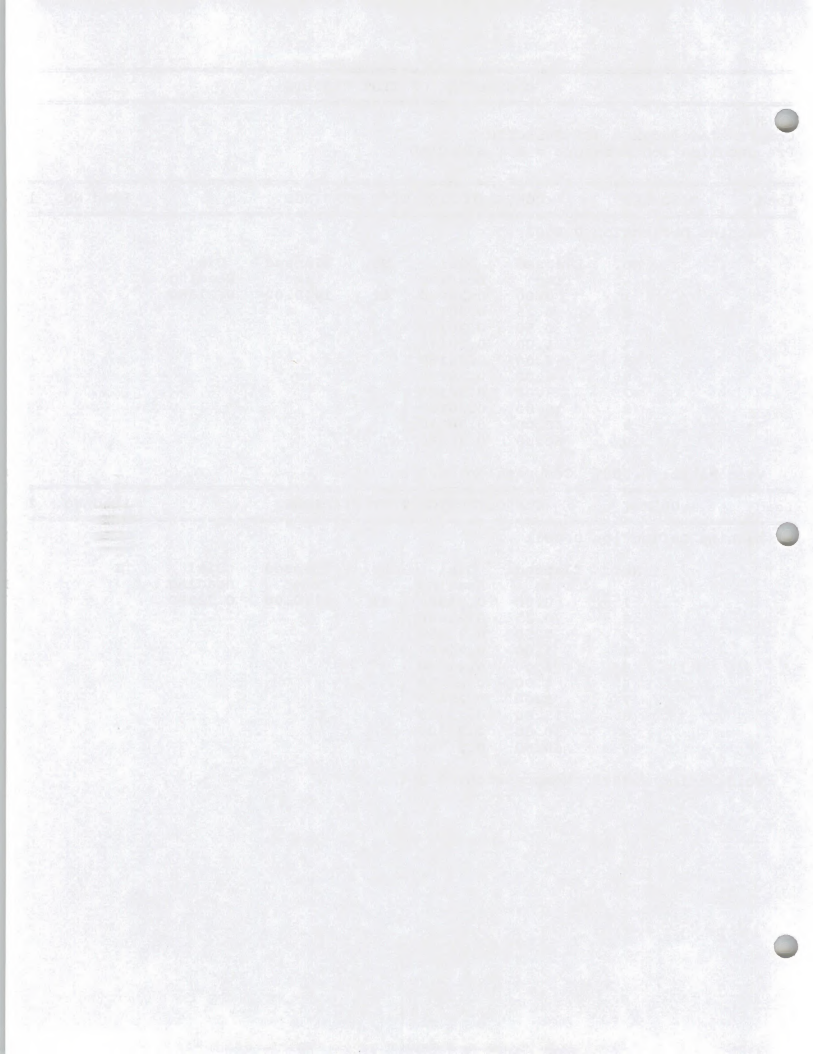
Void Ratio: 0.5007 Compression: 1.3 %

Load 1.00 ksf CONSOLIDATION TEST READINGS Load No. 2

Machine Deflection 0.0011

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.21380	11	1440.00	0.22290
2	0.25	0.21450			
3	0.50	0.21450			
4	1.00	0.21460			
5	2.00	0.21460			
6	4.00	0.21470			
7	8.00	0.21480			
8	15.00	0.21480			
9	30.00	0.21500			
10	60.00	0.21550			

Void Ratio: 0.4875 Compression: 2.2 %



Load	1.00 ksf	CONSOLIDATION TEST READINGS	Load No. 3
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Machine Deflection 0.0011

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.22290	11	1440.00	0.20010
2	0.25	0.22280			
3	0.50	0.22280			
4	1.00	0.22270			
5	2.00	0.22260			
6	4.00	0.22240			
7	8.00	0.22200			
8	15.00	0.22150			
9	30.00	0.22050			
10	60.00	0.21800			

Void Ratio: 0.5222 Swell: 0.1 %

Load	2.00 ksf	CONSOLIDATION TEST READINGS	Load No. 4
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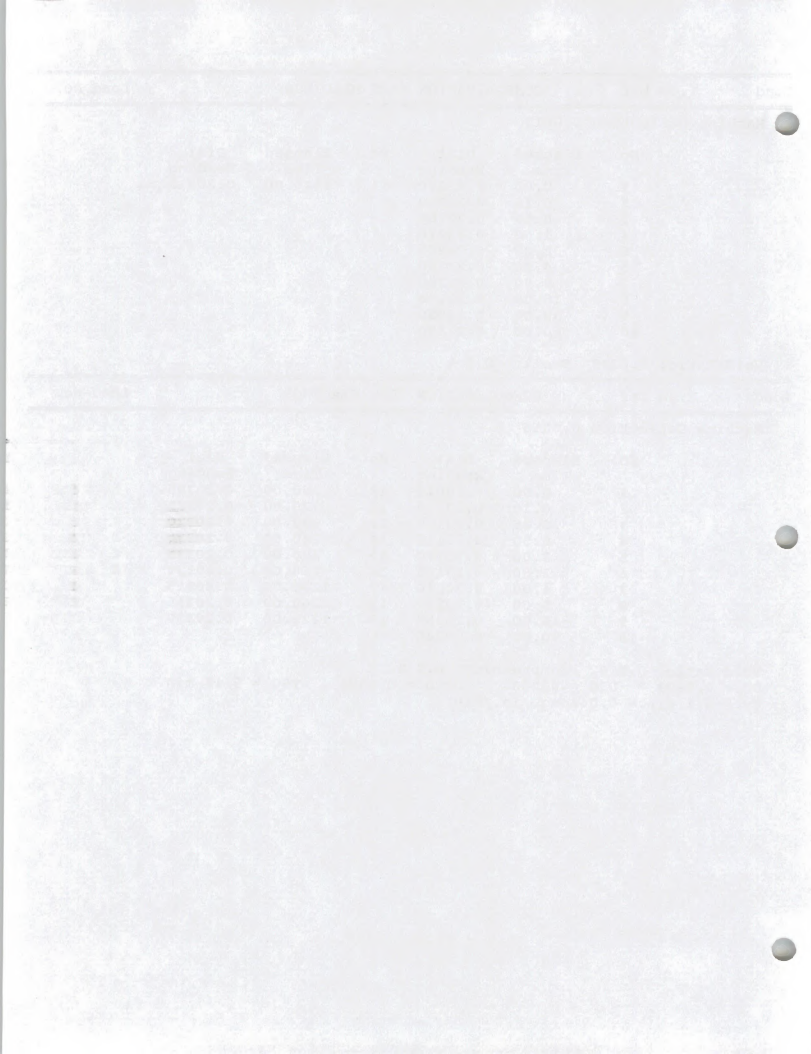
Machine Deflection 0.0015

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.20010	11	60.00	0.20305
2	0.10	0.20100	12	120.00	0.20325
3	0.25	0.20130	13	180.00	0.20330
4	0.50	0.20140	14	240.00	0.20330
5	1.00	0.20170	15	300.00	0.20335
6	2.00	0.20180	16	360.00	0.20335
7	4.00	0.20210	17	1200.00	0.20315
8	8.00	0.20230	18	1260.00	0.20315
9	15.00	0.20250	19	1320.00	0.20310
10	30.00	0.20280			

Void Ratio: 0.5182 Compression: 0.2 %

D0 = 0.1993 D90 = 0.2007 D100 = 0.2008 T90 = 5.14 min.

Cv @ 5.1 min. = 0.041 sq. in./min.



Load 4.00 ksf CONSOLIDATION TEST READINGS Load No. 5

Machine Deflection 0.0020

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.20310	11	60.00	0.20890
2	0.10	0.20430	12	120.00	0.20960
3	0.25	0.20510	13	180.00	0.21010
4	0.50	0.20530	14	240.00	0.21040
5	1.00	0.20570	15	300.00	0.21065
6	2.00	0.20610	16	420.00	0.21095
7	4.00	0.20650	17	1380.00	0.21175
8	8.00	0.20705	18	1440.00	0.21175
9	15.00	0.20760			
10	30.00	0.20820			

Void Ratio: 0.5058 Compression: 1.0 %
 D0 = 0.2018 D90 = 0.2046 D100 = 0.2049 T90 = 4.50 min.
 Cv @ 4.5 min. = 0.047 sq. in./min.

Load 8.00 ksf CONSOLIDATION TEST READINGS Load No. 6

Machine Deflection 0.0025

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.21175	11	60.00	0.21990
2	0.10	0.21410	12	120.00	0.22090
3	0.25	0.21460	13	180.00	0.22155
4	0.50	0.21490	14	240.00	0.22200
5	1.00	0.21530	15	300.00	0.22235
6	2.00	0.21590	16	360.00	0.22260
7	4.00	0.21675	17	420.00	0.22285
8	9.00	0.21740	18	488.00	0.22315
9	15.00	0.21800	19	1380.00	0.22410
10	30.00	0.21890	20	1440.00	0.22420

Void Ratio: 0.4877 Compression: 2.2 %
 D0 = 0.2111 D90 = 0.2146 D100 = 0.2149 T90 = 6.14 min.
 Cv @ 6.1 min. = 0.033 sq. in./min.

1. The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

2. The second part of the document is a list of the names and addresses of the members of the committee who have been elected to the office of the Secretary. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

3. The third part of the document is a list of the names and addresses of the members of the committee who have been elected to the office of the Treasurer. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

4. The fourth part of the document is a list of the names and addresses of the members of the committee who have been elected to the office of the Chairman. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

5. The fifth part of the document is a list of the names and addresses of the members of the committee who have been elected to the office of the Vice-Chairman. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

=====

Load	2.00 ksf	CONSOLIDATION TEST READINGS	Load No. 7
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Machine Deflection 0.0015

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.22420	11	120.00	0.21725
2	0.25	0.22190	12	240.00	0.21610
3	0.50	0.22145	13	300.00	0.21570
4	1.00	0.22090	14	360.00	0.21525
5	2.00	0.22065	15	420.00	0.21500
6	4.00	0.22030	16	1440.00	0.21300
7	8.00	0.21985			
8	15.00	0.21950			
9	30.00	0.21895			
10	60.00	0.21830			

Void Ratio: 0.5032 Compression: 1.2 %

=====

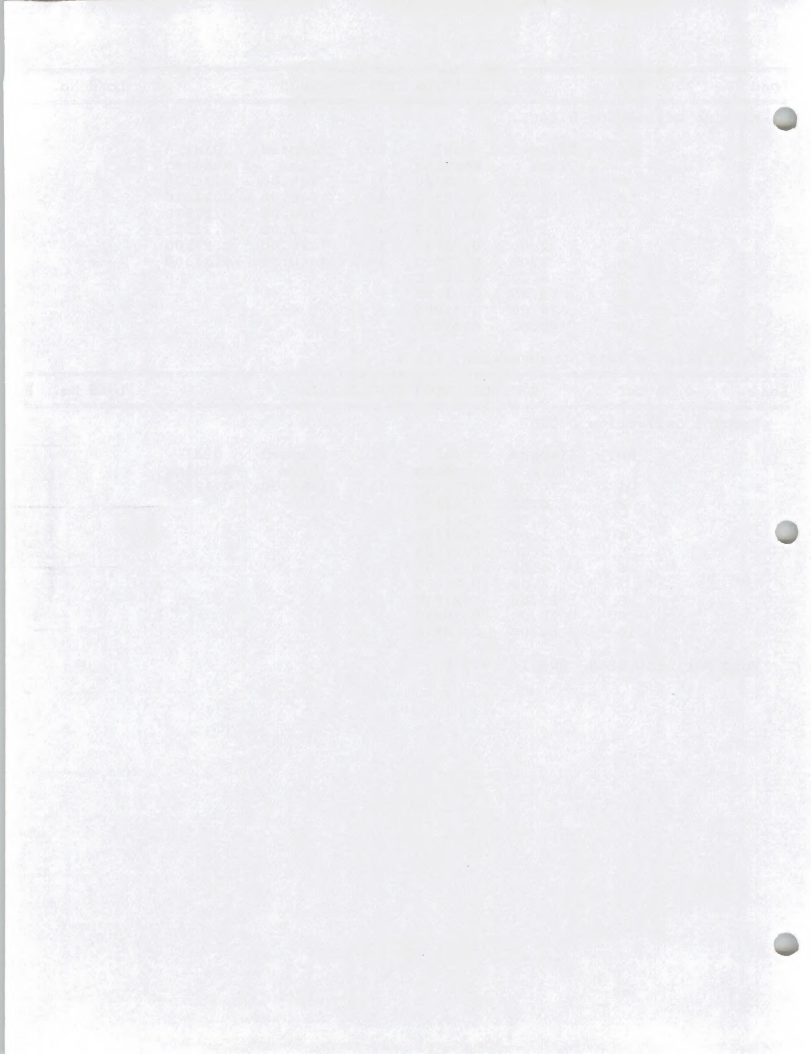
Load	0.50 ksf	CONSOLIDATION TEST READINGS	Load No. 8
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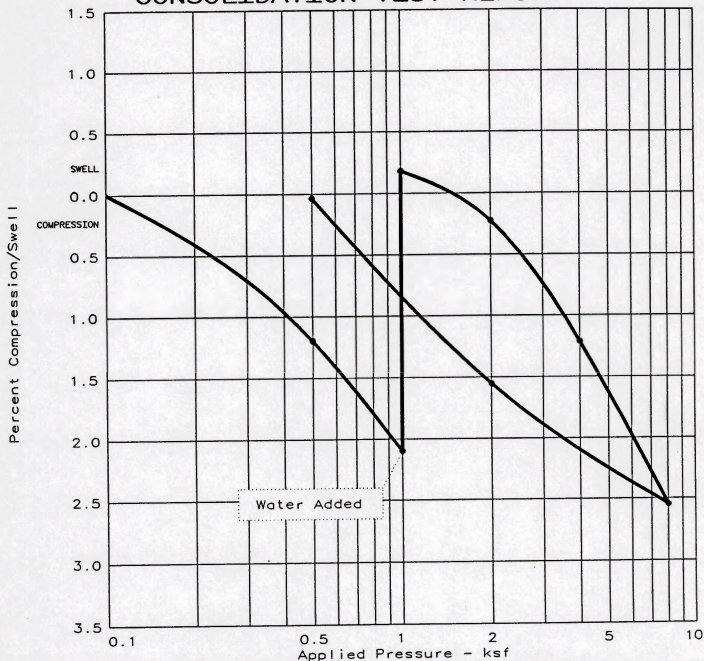
Machine Deflection 0.0007

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.21300	11	1982.00	0.19525
2	0.25	0.21190			
3	0.50	0.21170			
4	1.00	0.21150			
5	2.00	0.21125			
6	4.00	0.21095			
7	8.00	0.21050			
8	15.00	0.21010			
9	30.00	0.20940			
10	60.00	0.20840			

Void Ratio: 0.5289 Swell: 0.5 %



CONSOLIDATION TEST REPORT



Swell press.	Nat. Sat.	Nat. Moist.	Dry Dens. (pcf)	LL	PI	Sp.Gr.	Initial void ratio
5.39	97.2 %	20.9 %	105.8	N/T	N/T	2.650	0.5689

TEST RESULTS

Percent swell = 2.3

Project No.: 11M145.115
 Project: U.S.B.R.- Anita Dam
 Location: DH 97-201 @ 37.0'- 38.8'

Date: 05-29-97

CONSOLIDATION TEST REPORT

MSE-HKM, INC.

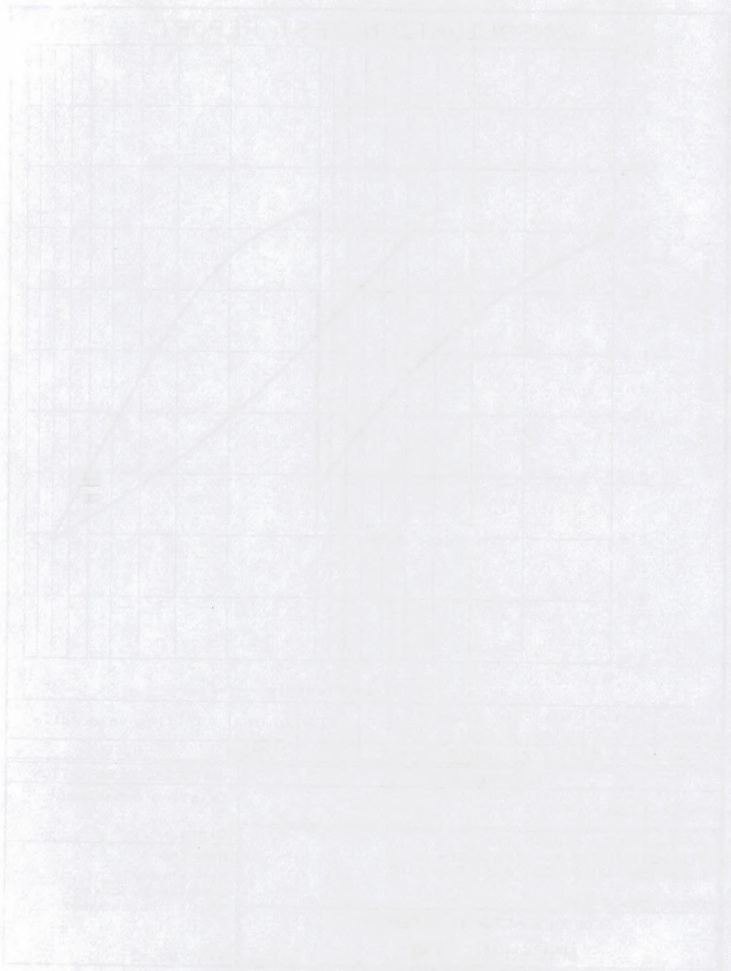
MATERIAL DESCRIPTION

Existing embankment

Class: N/T

Remarks:
 Lab #11848.
 Sampled by client.
 Sp.Gr. is assumed.

Fig. No. 2



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CONSOLIDATION TEST PROJECT DATA

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Test No. 20

Project Number: 11M145.115
 Project: U.S.B.R.- Anita Dam
 Date: 05-29-97
 Location 1: DH 97-201 @ 37.0'- 38.8'
 2:
 Remarks 1: Lab #11848.
 2: Sampled by client.
 3: Sp.Gr. is assumed.
 4:
 5:

Material description Existing embankment

Classification: N/T
 Liquid limit: N/T
 Plasticity index: N/T
 Figure Number: 2

=====

CONSOLIDATION TEST SPECIMEN DATA

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TOTAL SAMPLE	BEFORE TEST	AFTER TEST
Wet w+t = 227.10 g.	Oedometer No. = 2	Wet w+t = 535.10 g.
Dry w+t = 187.90 g	Machine No. = 2	Dry w+t = 517.30 g.
Tare wt. = 0.00 g	Spec. Gravity = 2.650	Tare wt. = 435.40 g.
Height = 1.0010 in.	Height = 1.0010 in.	
Diameter = 1.9400 in.	Diameter = 1.9400 in.	
Weight = 99.31 g.		
Moisture = 20.9 %	Ht. Solids = 0.6380 in.	Moisture = 21.7 %
Wet Den. = 127.9 pcf	Dry wt. = 82.17 g.	Dry wt. = 81.90 g. *
Dry Den. = 105.8 pcf	Void ratio = 0.5689	Void ratio = 0.5683
	Saturation = 97.2 %	

* Final dry weight used in calculations

=====

CONSOLIDATION TEST READINGS SUMMARY

=====

LOAD (ksf)	DIAL (in.)	DEFLECTION (in.)	CORRECTED DIAL (in.)	VOID RATIO	% SWELL/COMPRS.
Initial	0.20000			0.5689	
0.50	0.21250	0.0005	0.21200	0.5501	1.2 Compr.
1.00	0.22150	0.0005	0.22100	0.5360	2.1 Compr.
1.00	0.19870	0.0005	0.19820	0.5717	0.2 Swell
2.00	0.20305	0.0008	0.20225	0.5654	0.2 Compr.
4.00	0.21305	0.0009	0.21215	0.5498	1.2 Compr.
8.00	0.22700	0.0015	0.22550	0.5289	2.5 Compr.
2.00	0.21635	0.0008	0.21555	0.5445	1.6 Compr.
0.50	0.20085	0.0005	0.20035	0.5683	0.0 Compr.

1. The first part of the document is a list of names and addresses of the members of the committee.

2. The second part of the document is a list of names and addresses of the members of the committee.

3. The third part of the document is a list of names and addresses of the members of the committee.

4. The fourth part of the document is a list of names and addresses of the members of the committee.

5. The fifth part of the document is a list of names and addresses of the members of the committee.

6. The sixth part of the document is a list of names and addresses of the members of the committee.

7. The seventh part of the document is a list of names and addresses of the members of the committee.

8. The eighth part of the document is a list of names and addresses of the members of the committee.

9. The ninth part of the document is a list of names and addresses of the members of the committee.

10. The tenth part of the document is a list of names and addresses of the members of the committee.

11. The eleventh part of the document is a list of names and addresses of the members of the committee.

12. The twelfth part of the document is a list of names and addresses of the members of the committee.

13. The thirteenth part of the document is a list of names and addresses of the members of the committee.

14. The fourteenth part of the document is a list of names and addresses of the members of the committee.

15. The fifteenth part of the document is a list of names and addresses of the members of the committee.

16. The sixteenth part of the document is a list of names and addresses of the members of the committee.

17. The seventeenth part of the document is a list of names and addresses of the members of the committee.

18. The eighteenth part of the document is a list of names and addresses of the members of the committee.

19. The nineteenth part of the document is a list of names and addresses of the members of the committee.

20. The twentieth part of the document is a list of names and addresses of the members of the committee.

21. The twenty-first part of the document is a list of names and addresses of the members of the committee.

22. The twenty-second part of the document is a list of names and addresses of the members of the committee.

23. The twenty-third part of the document is a list of names and addresses of the members of the committee.

24. The twenty-fourth part of the document is a list of names and addresses of the members of the committee.

25. The twenty-fifth part of the document is a list of names and addresses of the members of the committee.

26. The twenty-sixth part of the document is a list of names and addresses of the members of the committee.

27. The twenty-seventh part of the document is a list of names and addresses of the members of the committee.

28. The twenty-eighth part of the document is a list of names and addresses of the members of the committee.

CONSOLIDATION TEST RESULTS

Compression index = NOT SELECTED
 Preconsolidation pressure = NOT SELECTED
 Swell pressure = 5.39 @ 1.000 ksf applied
 Swell percentage = 2.3 @ 1.000 ksf applied

Load 0.50 ksf CONSOLIDATION TEST READINGS Load No. 1

Machine Deflection 0.0005

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.20000	11	1440.00	0.21250
2	0.25	0.20190			
3	0.50	0.20200			
4	1.00	0.20200			
5	2.00	0.20210			
6	4.00	0.20220			
7	8.00	0.20230			
8	15.00	0.20230			
9	30.00	0.20240			
10	60.00	0.20290			

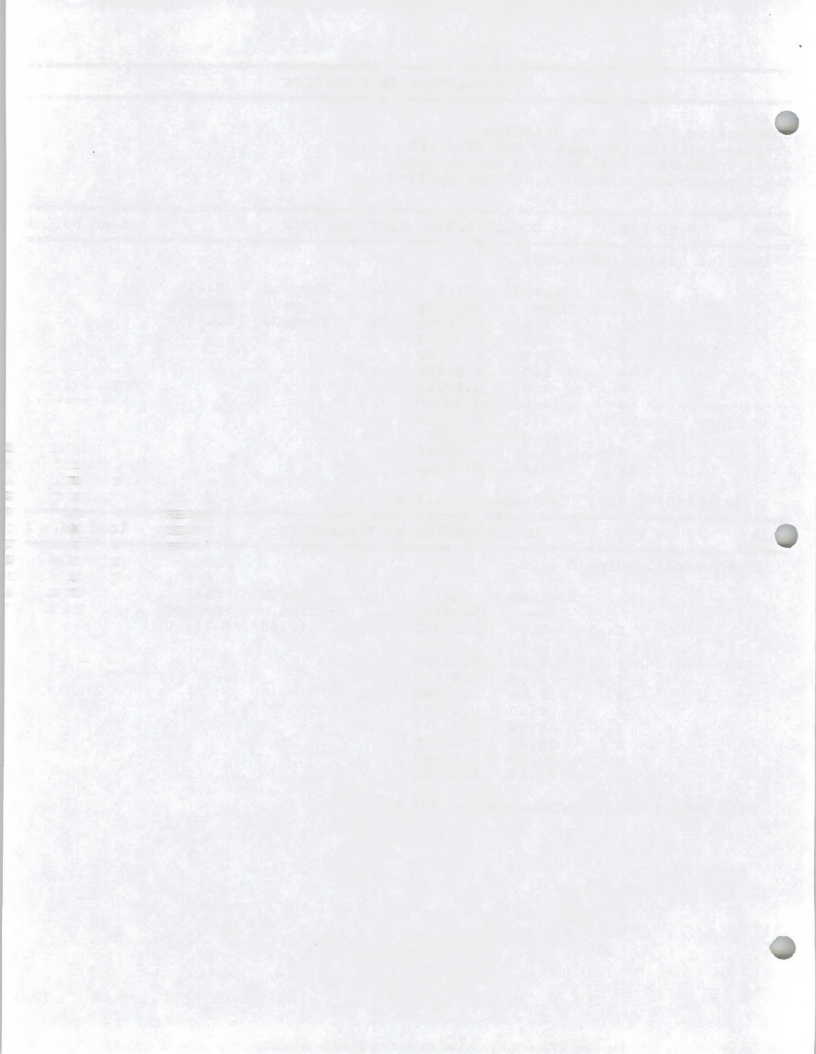
Void Ratio: 0.5501 Compression: 1.2 %

Load 1.00 ksf CONSOLIDATION TEST READINGS Load No. 2

Machine Deflection 0.0005

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.21250	11	1440.00	0.22150
2	0.25	0.21280			
3	0.50	0.21290			
4	1.00	0.21290			
5	2.00	0.21290			
6	4.00	0.21300			
7	8.00	0.21310			
8	15.00	0.21320			
9	30.00	0.21340			
10	60.00	0.21380			

Void Ratio: 0.5360 Compression: 2.1 %



Load	1.00 ksf	CONSOLIDATION TEST READINGS	Load No.	3
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Machine Deflection 0.0005

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.22150	11	1440.00	0.19870
2	0.25	0.22090			
3	0.50	0.22090			
4	1.00	0.22060			
5	2.00	0.22040			
6	4.00	0.21990			
7	8.00	0.21870			
8	15.00	0.21760			
9	30.00	0.21580			
10	60.00	0.21200			

Void Ratio: 0.5717 Swell: 0.2 %

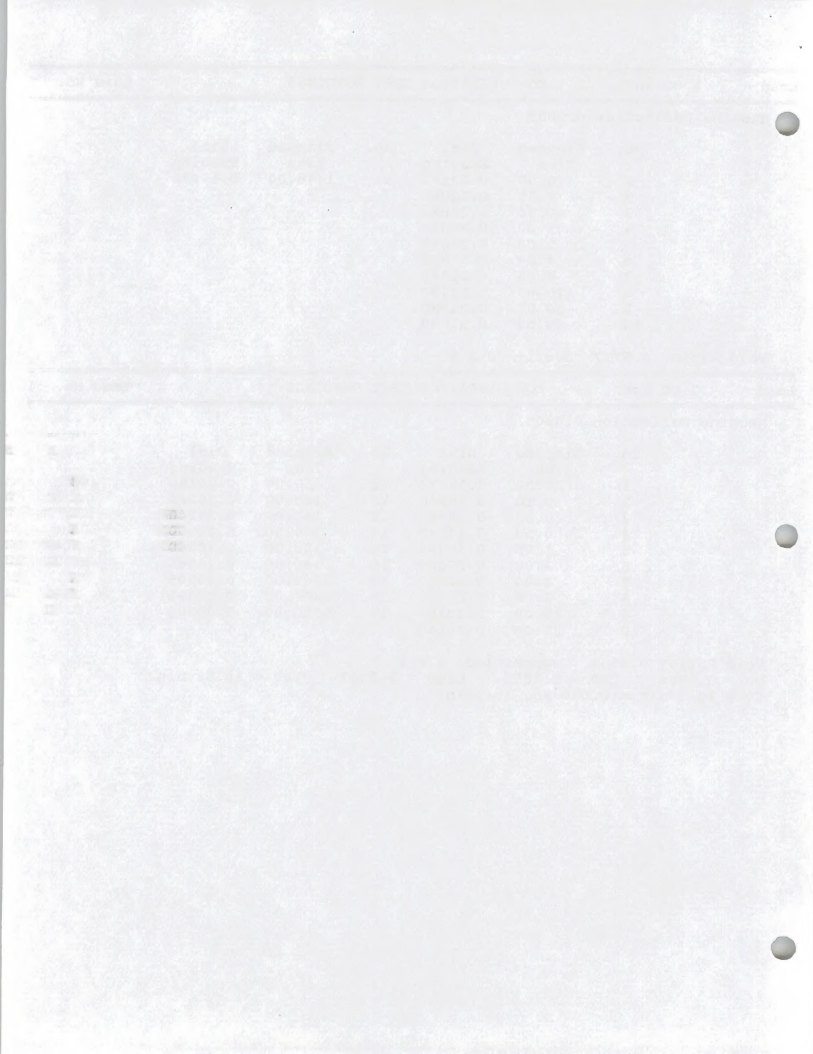
Load	2.00 ksf	CONSOLIDATION TEST READINGS	Load No.	4
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Machine Deflection 0.0008

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.19870	11	60.00	0.20180
2	0.10	0.19940	12	120.00	0.20220
3	0.25	0.19960	13	180.00	0.20240
4	0.50	0.19970	14	240.00	0.20250
5	1.00	0.19990	15	300.00	0.20260
6	2.00	0.20000	16	360.00	0.20265
7	4.00	0.20030	17	1200.00	0.20305
8	8.00	0.20060	18	1264.00	0.20305
9	15.00	0.20100	19	1320.00	0.20305
10	30.00	0.20140			

Void Ratio: 0.5654 Compression: 0.2 %

D0 = 0.1984 D90 = 0.2000 D100 = 0.2001 T90 = 10.58 min.
Cv @ 10.6 min. = 0.020 sq. in./min.



Load	4.00 ksf	CONSOLIDATION TEST READINGS	Load No. 5
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Machine Deflection 0.0009

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.20305	11	60.00	0.20995
2	0.10	0.20430	12	120.00	0.21100
3	0.25	0.20470	13	180.00	0.21150
4	0.50	0.20490	14	240.00	0.21180
5	1.00	0.20530	15	300.00	0.21205
6	2.00	0.20580	16	420.00	0.21235
7	4.00	0.20640	17	1380.00	0.21285
8	8.00	0.20710	18	1440.00	0.21305
9	15.00	0.20790			
10	30.00	0.20895			

Void Ratio: 0.5498 Compression: 1.2 %
 D0 = 0.2030 D90 = 0.2062 D100 = 0.2065 T90 = 7.72 min.
 Cv @ 7.7 min. = 0.027 sq. in./min.

Load	8.00 ksf	CONSOLIDATION TEST READINGS	Load No. 6
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Machine Deflection 0.0015

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.21305	11	60.00	0.22275
2	0.10	0.21520	12	120.00	0.22415
3	0.25	0.21580	13	180.00	0.22490
4	0.50	0.21600	14	240.00	0.22535
5	1.00	0.21670	15	300.00	0.22565
6	2.00	0.21735	16	360.00	0.22585
7	4.00	0.21810	17	420.00	0.22600
8	8.00	0.21900	18	480.00	0.22615
9	15.00	0.22000	19	1380.00	0.22685
10	30.00	0.22125	20	1440.00	0.22700

Void Ratio: 0.5289 Compression: 2.5 %
 D0 = 0.2131 D90 = 0.2171 D100 = 0.2176 T90 = 6.24 min.
 Cv @ 6.2 min. = 0.033 sq. in./min.

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Load	2.00 ksf	CONSOLIDATION TEST READINGS	Load No.	7
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Machine Deflection 0.0008

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.22700	11	120.00	0.21910
2	0.25	0.22500	12	240.00	0.21785
3	0.50	0.22530	13	300.00	0.21750
4	1.00	0.22490	14	360.00	0.21720
5	2.00	0.22465	15	420.00	0.21710
6	4.00	0.22420	16	1440.00	0.21635
7	8.00	0.22350			
8	15.00	0.22280			
9	30.00	0.22180			
10	60.00	0.22045			

Void Ratio: 0.5445 Compression: 1.6 %

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Load	0.50 ksf	CONSOLIDATION TEST READINGS	Load No.	8
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Machine Deflection 0.0005

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.00	0.21635	11	1980.00	0.20085
2	0.25	0.21540			
3	0.50	0.21510			
4	1.00	0.21490			
5	2.00	0.21465			
6	4.00	0.21415			
7	8.00	0.21355			
8	15.00	0.21280			
9	30.00	0.21175			
10	60.00	0.21015			

Void Ratio: 0.5683 Compression: 0.0 %

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research.

2. The second part of the report is a detailed description of the methodology used in the study. It includes information about the sample size, the data collection methods, and the statistical analysis techniques used.

3. The third part of the report is a discussion of the results of the study. It compares the findings with the previous research and discusses the implications of the results.

4. The fourth part of the report is a conclusion and a summary of the findings. It also includes some recommendations for further research.

5. The fifth part of the report is a list of references. It includes all the sources used in the study.

6. The sixth part of the report is an appendix. It includes any additional information that is relevant to the study.

7. The seventh part of the report is a glossary. It defines the key terms used in the study.

8. The eighth part of the report is a bibliography. It lists all the books and articles cited in the study.

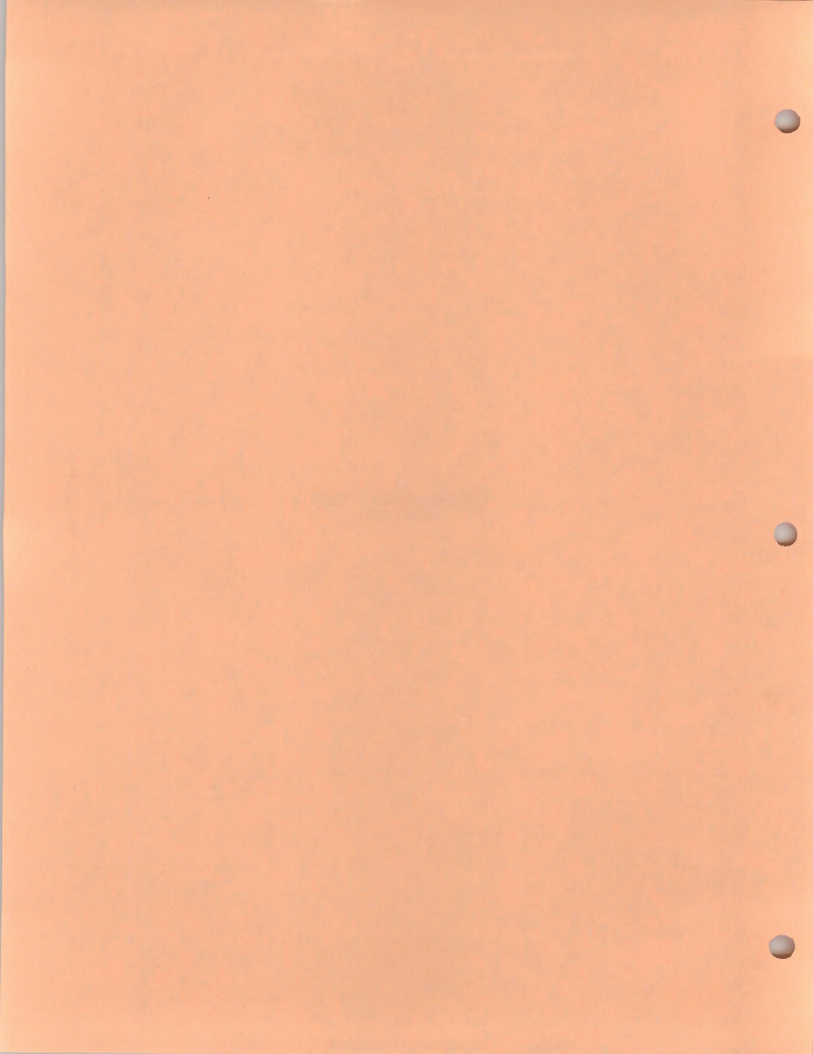
9. The ninth part of the report is a list of figures and tables. It includes all the visual aids used in the study.

10. The tenth part of the report is a list of footnotes. It includes any additional information that is not included in the main text.

11. The eleventh part of the report is a list of appendices. It includes any additional information that is not included in the main text.

12. The twelfth part of the report is a list of references. It includes all the sources used in the study.

DISPERSIVE CLAY TESTS
PR97-202



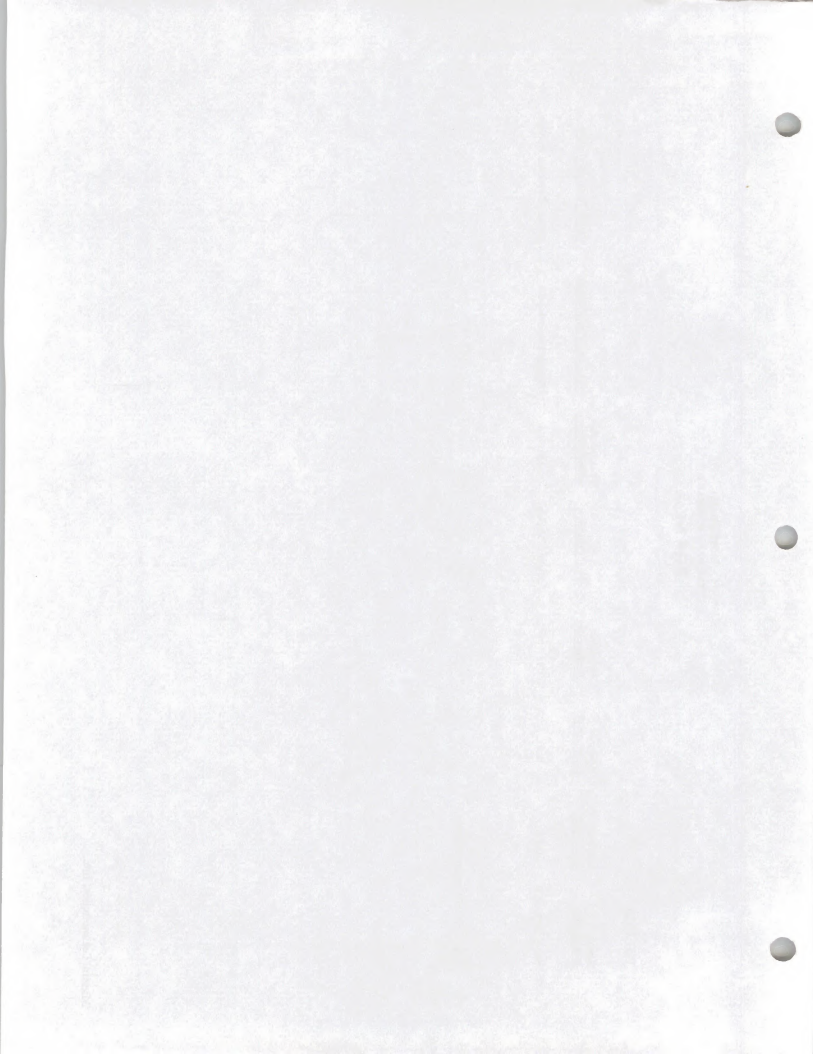
ANITA DAM
TEST DATA SUMMARY

PR97-202

TEST DATA

<u>Sample Identification</u>	<u>Remolded Dry Density(pcf)</u>	<u>Moisture Content (%)*</u>	<u>Hydraulic Head(inches)</u>	<u>Final Cloudiness</u>	<u>Final Diameter of Pinhole(mm)</u>	<u>Dispersive Classification</u>	<u>Crumb Test Classification</u>
No. 1 19.5'-24.5'	113.2	14.4	15	Slight to Medium	2.5	Slightly Dispersive-SD	Definite Dispersion Problem

* As Received Moisture Content



Client Name: USDI BUREAU OF LAND MANAGEMENT - MILES CITY
Project No.: 93-925-1
Laboratory No.: 184008
Sample Name: PINHOLE 19.5-24.5'
Sample Date: 05/12/97
Collected by: NONE GIVEN
Time Sampled: NONE GIVEN
Sample Type: SOIL

PARAMETER	MEASURED VALUE	METHOD NUMBER	DATE ANALYZED
SOIL			
Calcium saturated paste	22.4	meq/l	\$ 1.60 06/20/97
Electrical Conductivity Saturated Paste	7.53	mmhos/cm	\$ 1.20 06/19/97
Magnesium saturated paste	18.5	meq/l	\$ 1.60 06/20/97
Sodium Absorption Ratio	13.2		\$ 1.60 06/20/97
Sodium saturated paste	59.5	meq/l	\$ 1.60 06/20/97
Total Dissolved Salts	4820	mg/l	\$ 1.20 06/19/97

